REGULATION 13
PERMIT APPLICATION
FOR TRUCK ASSEMBLY FACILITY

Prepared for:

Hino Motors Manufacturing U.S.A., Inc.
1 Hino Way
Williamstown, West Virginia 26187

Prepared by:

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Project No. 0101-14-0346-004

May 2015

POTESTA

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SECTION I - III

GENERAL APPLICANT INFORMATION

WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION

DIVISION OF AIR QUALITY

601 57th Street, SE
Charleston, WV 25304
(304) 926-0475
www.dep.wv.gov/daq

APPLICATION FOR NSR PERMIT AND TITLE V PERMIT REVISION (OPTIONAL)

PLEASE CHECK ALL THAT APPLY TO **NSR (45CSR13)** (IF KNOWN):

☒ **CONSTRUCTION** ☐ **MODIFICATION** ☐ **RELOCATION**
☐ **CLASS I ADMINISTRATIVE UPDATE** ☐ **TEMPORARY**
☐ **CLASS II ADMINISTRATIVE UPDATE** ☐ **AFTER-THE-FACT**

PLEASE CHECK TYPE OF **45CSR30 (TITLE V)** REVISION (IF ANY):

☐ **ADMINISTRATIVE AMENDMENT** ☐ **MINOR MODIFICATION**
☐ **SIGNIFICANT MODIFICATION**

IF ANY BOX ABOVE IS CHECKED, INCLUDE TITLE V REVISION INFORMATION AS **ATTACHMENT S** TO THIS APPLICATION

FOR TITLE V FACILITIES ONLY: Please refer to "Title V Revision Guidance" in order to determine your Title V Revision options (Appendix A, "Title V Permit Revision Flowchart") and ability to operate with the changes requested in this Permit Application.

Section I. General

1. Name of applicant *(as registered with the WV Secretary of State's Office):*
Hino Motors Manufacturing U.S.A., Inc.

2. Federal Employer ID No. ***(FEIN):***
33-0638183

3. Name of facility *(if different from above):*
West Virginia Plant

4. The applicant is the:
☐ **OWNER** ☐ **OPERATOR** ☒ **BOTH**

5A. Applicant's mailing address:
1 Hino Way
Williamstown, WV 26187

5B. Facility's present physical address:
1 Hino Way
Williamstown, WV 26187

6. **West Virginia Business Registration.** Is the applicant a resident of the State of West Virginia? ☒ **YES** ☐ **NO**

➪ If **YES,** provide a copy of the **Certificate of Incorporation/Organization/Limited Partnership** (one page) including any name change amendments or other Business Registration Certificate as **Attachment A.**

➪ If **NO,** provide a copy of the **Certificate of Authority/Authority of L.L.C./Registration** (one page) including any name change amendments or other Business Certificate as **Attachment A.**

7. If applicant is a subsidiary corporation, please provide the name of parent corporation: Hino Motors, Ltd.

8. Does the applicant own, lease, have an option to buy or otherwise have control of the *proposed site?* ☒ **YES** ☐ **NO**

➪ If **YES,** please explain: Own

➪ If **NO,** you are not eligible for a permit for this source.

9. Type of plant or facility (stationary source) to be **constructed, modified, relocated, administratively updated** or **temporarily permitted** (e.g., coal preparation plant, primary crusher, etc.): Truck Assembly and Painting Facility

10. North American Industry Classification System **(NAICS)** code for the facility:
371101

11A. DAQ Plant ID No. (for existing facilities only):
NA

11B. List all current 45CSR13 and 45CSR30 (Title V) permit numbers associated with this process (for existing facilities only):
NA

All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.

12A.

- ➪ For **Modifications, Administrative Updates** or **Temporary permits** at an existing facility, please provide directions to the *present location* of the facility from the nearest state road;
- ➪ For **Construction** or **Relocation permits,** please provide directions to the *proposed new site location* from the nearest state road. Include a **MAP** as **Attachment B.**

From I-77, take Exit #185 to Williamstown (State Route 51) and go 0.2 miles. Turn left on Highland Avenue (State Route 14) and go 1.4 miles. Turn left on State Route 14 go 1.5 miles and the facility is located on the left.

12.B. New site address (if applicable):	12C. Nearest city or town:	12D. County:
NA	Williamstown	Wood
12.E. UTM Northing (KM): 4,360.59698	12F. UTM Easting (KM): 459.52454	12G. UTM Zone: 17

13. Briefly describe the proposed change(s) at the facility:
Addition of custom painting operations and cover the existing and proposed facility.

14A. Provide the date of anticipated installation or change: 09/01/2015 ➪ If this is an **After-The-Fact** permit application, provide the date upon which the proposed change did happen:	14B. Date of anticipated Start-Up if a permit is granted: 09/01/2015

14C. Provide a **Schedule** of the planned **Installation** of/**Change** to and **Start-Up** of each of the units proposed in this permit application as **Attachment C** (if more than one unit is involved).

15. Provide maximum projected **Operating Schedule** of activity/activities outlined in this application:
24 Hours Per Day 7 Days Per Week 52 Weeks Per Year

16. Is demolition or physical renovation at an existing facility involved? ☒ **YES** ☐ **NO**

17. **Risk Management Plans.** If this facility is subject to 112(r) of the 1990 CAAA, or will become subject due to proposed changes (for applicability help see www.epa.gov/ceppo), submit your **Risk Management Plan (RMP)** to U. S. EPA Region III.

18. **Regulatory Discussion.** List all Federal and State air pollution control regulations that you believe are applicable to the proposed process *(if known)*. A list of possible applicable requirements is also included in Attachment S of this application (Title V Permit Revision Information). Discuss applicability and proposed demonstration(s) of compliance *(if known)*. Provide this information as **Attachment D.**

Section II. Additional attachments and supporting documents.

19. Include a check payable to WVDEP – Division of Air Quality with the appropriate **application fee** (per 45CSR22 and 45CSR13).

20. Include a **Table of Contents** as the first page of your application package.

21. Provide a **Plot Plan,** e.g. scaled map(s) and/or sketch(es) showing the location of the property on which the stationary source(s) is or is to be located as **Attachment E** (Refer to ***Plot Plan Guidance***) .
Indicate the location of the nearest occupied structure (e.g. church, school, business, residence).

22. Provide a **Detailed Process Flow Diagram(s)** showing each proposed or modified emissions unit, emission point and control device as **Attachment F.**

23. Provide a **Process Description** as **Attachment G.**
Also describe and quantify to the extent possible all changes made to the facility since the last permit review (if applicable).

All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.

24. Provide **Material Safety Data Sheets (MSDS)** for all materials processed, used or produced as **Attachment H.**

☐ For chemical processes, provide a MSDS for each compound emitted to the air.

25. Fill out the **Emission Units Table** and provide it as **Attachment I.**

26. Fill out the **Emission Points Data Summary Sheet (Table 1 and Table 2)** and provide it as **Attachment J.**

27. Fill out the **Fugitive Emissions Data Summary Sheet** and provide it as **Attachment K.**

28. Check all applicable **Emissions Unit Data Sheets** listed below:

☐ Bulk Liquid Transfer Operations	☒ Haul Road Emissions	☐ Quarry
☐ Chemical Processes	☐ Hot Mix Asphalt Plant	☐ Solid Materials Sizing, Handling and Storage Facilities
☐ Concrete Batch Plant	☐ Incinerator	☐ Storage Tanks
☐ Grey Iron and Steel Foundry	☐ Indirect Heat Exchanger	

☒ General Emission Unit, specify Paint Booths, Body Prep, Inspection with Touchup Paint/Cleaning, Welding, Engine Testing, Parts Washers, Emergency Generator, Building Heat.

Fill out and provide the **Emissions Unit Data Sheet(s)** as **Attachment L.**

29. Check all applicable **Air Pollution Control Device Sheets** listed below:

☐ Absorption Systems	☐ Baghouse	☐ Flare
☐ Adsorption Systems	☐ Condenser	☐ Mechanical Collector
☐ Afterburner	☐ Electrostatic Precipitator	☐ Wet Collecting System

☒ Other Collectors, specify Paint Filter.

Fill out and provide the **Air Pollution Control Device Sheet(s)** as **Attachment M.**

30. Provide all **Supporting Emissions Calculations** as **Attachment N,** or attach the calculations directly to the forms listed in Items 28 through 31.

31. **Monitoring, Recordkeeping, Reporting and Testing Plans.** Attach proposed monitoring, recordkeeping, reporting and testing plans in order to demonstrate compliance with the proposed emissions limits and operating parameters in this permit application. Provide this information as **Attachment O.**

➢ Please be aware that all permits must be practically enforceable whether or not the applicant chooses to propose such measures. Additionally, the DAQ may not be able to accept all measures proposed by the applicant. If none of these plans are proposed by the applicant, DAQ will develop such plans and include them in the permit.

32. **Public Notice.** At the time that the application is submitted, place a **Class I Legal Advertisement** in a newspaper of general circulation in the area where the source is or will be located (See 45CSR§13-8.3 through 45CSR§13-8.5 and ***Example Legal Advertisement*** for details). Please submit the **Affidavit of Publication** as **Attachment P** immediately upon receipt.

33. **Business Confidentiality Claims.** Does this application include confidential information (per 45CSR31)?

☐ **YES** ☒ **NO**

➢ If **YES,** identify each segment of information on each page that is submitted as confidential and provide justification for each segment claimed confidential, including the criteria under 45CSR§31-4.1, and in accordance with the DAQ's ***"Precautionary Notice – Claims of Confidentiality"*** guidance found in the ***General Instructions*** as **Attachment Q.**

Section III. Certification of Information

34. **Authority/Delegation of Authority.** Only required when someone other than the responsible official signs the application. Check applicable **Authority Form** below:

☐ Authority of Corporation or Other Business Entity	☐ Authority of Partnership
☐ Authority of Governmental Agency	☐ Authority of Limited Partnership

Submit completed and signed **Authority Form** as **Attachment R.**

All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.

35A. **Certification of Information.** To certify this permit application, a Responsible Official (per 45CSR§13-2.22 and 45CSR§30-2.28) or Authorized Representative shall check the appropriate box and sign below.

Certification of Truth, Accuracy, and Completeness

I, the undersigned ☒ **Responsible Official** / ☐ **Authorized Representative,** hereby certify that all information contained in this application and any supporting documents appended hereto, is true, accurate, and complete based on information and belief after reasonable inquiry I further agree to assume responsibility for the construction, modification and/or relocation and operation of the stationary source described herein in accordance with this application and any amendments thereto, as well as the Department of Environmental Protection, Division of Air Quality permit issued in accordance with this application, along with all applicable rules and regulations of the West Virginia Division of Air Quality and W.Va. Code § 22-5-1 et seq. (State Air Pollution Control Act). If the business or agency changes its Responsible Official or Authorized Representative, the Director of the Division of Air Quality will be notified in writing within 30 days of the official change.

Compliance Certification

Except for requirements identified in the Title V Application for which compliance is not achieved, I, the undersigned hereby certify that, based on information and belief formed after reasonable inquiry, all air contaminant sources identified in this application are in compliance with all applicable requirements.

SIGNATURE Steve Stalnaker DATE: May 20, 2015
(Please use blue ink) *(Please use blue ink)*

35B. Printed name of signee: Steve Stalnaker		35C. Title: Vice President
35D. E-mail: sstalnaker@hmmusa.com	36E. Phone: (304) 375-6703	36F. FAX: (304) 375-6767
36A. Printed name of contact person (if different from above): Same		36B. Title:
36C. E-mail:	36D. Phone:	36E. FAX:

PLEASE CHECK ALL APPLICABLE ATTACHMENTS INCLUDED WITH THIS PERMIT APPLICATION:

☒ **Attachment A: Business Certificate**
☒ **Attachment B: Map(s)**
☒ **Attachment C: Installation and Start Up Schedule**
☒ **Attachment D: Regulatory Discussion**
☒ **Attachment E: Plot Plan**
☒ **Attachment F: Detailed Process Flow Diagram(s)**
☒ **Attachment G: Process Description**
☒ **Attachment H: Material Safety Data Sheets (MSDS)**
☒ **Attachment I: Emission Units Table**
☒ **Attachment J: Emission Points Data Summary Sheet**
☒ **Attachment K: Fugitive Emissions Data Summary Sheet**
☒ **Attachment L: Emissions Unit Data Sheet(s)**
☒ **Attachment M: Air Pollution Control Device Sheet(s)**
☒ **Attachment N: Supporting Emissions Calculations**
☒ **Attachment O: Monitoring/Recordkeeping/Reporting/Testing Plans**
☒ **Attachment P: Public Notice**
☐ **Attachment Q: Business Confidential Claims**
☐ **Attachment R: Authority Forms**
☐ **Attachment S: Title V Permit Revision Information**
☒ **Application Fee**

Please mail an original and three (3) copies of the complete permit application with the signature(s) to the DAQ, Permitting Section, at the address listed on the first page of this application. Please DO NOT fax permit applications.

FOR AGENCY USE ONLY – IF THIS IS A TITLE V SOURCE:

☐ *Forward 1 copy of the application to the Title V Permitting Group and:*
☐ *For Title V Administrative Amendments:*
  ☐ *NSR permit writer should notify Title V permit writer of draft permit,*
☐ *For Title V Minor Modifications:*
  ☐ *Title V permit writer should send appropriate notification to EPA and affected states within 5 days of receipt,*
  ☐ *NSR permit writer should notify Title V permit writer of draft permit.*
☐ *For Title V Significant Modifications processed in parallel with NSR Permit revision:*
  ☐ *NSR permit writer should notify a Title V permit writer of draft permit,*
  ☐ *Public notice should reference both 45CSR13 and Title V permits,*
  ☐ *EPA has 45 day review period of a draft permit.*

All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.

ATTACHMENT A

BUSINESS CERTIFICATE

WEST VIRGINIA
STATE TAX DEPARTMENT
BUSINESS REGISTRATION CERTIFICATE

ISSUED TO:
HINO MOTORS MANUFACTURING U.S.A., INC.
1 HINO WAY
WILLIAMSTOWN, WV 26187-9605

BUSINESS REGISTRATION ACCOUNT NUMBER: **2002-8882**

This certificate is issued on: 06/24/2010

This certificate is issued by
the West Virginia State Tax Commissioner
in accordance with W.Va. Code § 11-12.

The person or organization identified on this certificate is registered to conduct business in the State of West Virginia at the location above.

This certificate is not transferrable and must be displayed at the location for which issued.

This certificate shall be permanent until cessation of the business for which the certificate of registration was granted or until it is suspended, revoked or cancelled by the Tax Commissioner.

Change in name or change of location shall be considered a cessation of the business and a new certificate shall be required.

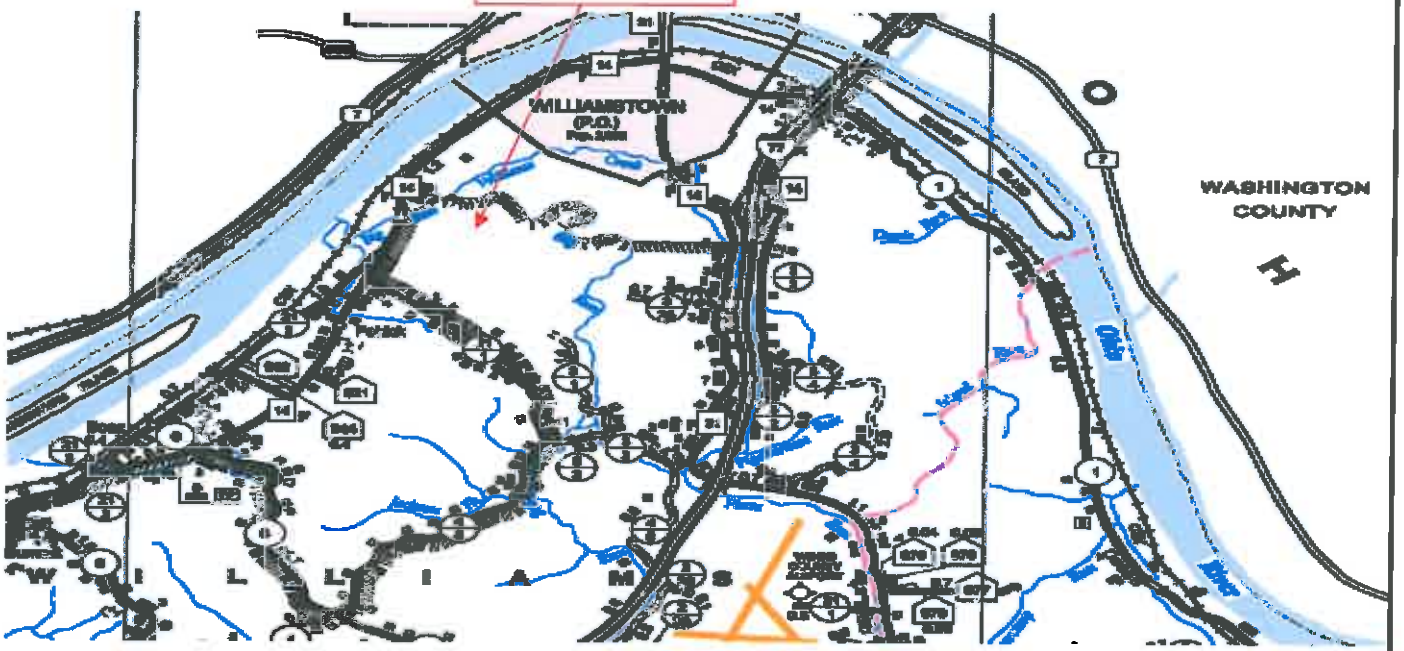
TRAVELING/STREET VENDORS: Must carry a copy of this certificate in every vehicle operated by them. CONTRACTORS, DRILLING OPERATORS, TIMBER/LOGGING OPERATIONS: Must have a copy of this certificate displayed at every job site within West Virginia.

atL006 v.1
L1088215808

ATTACHMENT B

AREA MAP

Facility Location



POTESTA
Engineers and Environmental Consultants

7012 MacCorkle Avenue, S.E
Charleston, West Virginia 25304
Phone: (304) 342-1400
Fax: (304) 343-9031

Area Map
Hino Truck Assembly Facility
Hino Motors Manufacturing U.S.A., Inc.
Wood County, West Virginia

ATTACHMENT C

INSTALLATION AND STARTUP SCHEDUULE

ATTACHMENT C

INSTALLATION AND STARTUP SCHEDULE

The existing truck assembly operation was installed and started operations in 2007. The initial operation was for assembly of vehicles only. The cabs and fenders of these vehicles are received painted in white. The proposed addition to the facility is a custom color department. Installation of the preparation and painting operations is expected to start in September 2015. Startup of the custom color department will occur immediately after installation.

ATTACHMENT D

REGULATORY DISCUSSION

ATTACHMENT D

REGULATORY DISCUSSION

The facility is required to comply with the requirements contained in the applicable provisions of (1) 45CSR4, (2) 45CSR7, and (3) 45CSR13, (4) 45CSR21, and (5) 40CFR60, Subpart JJJJ, Standards of Performance for Stationary Spark Ignition Internal Combustion Engines. (6) National Emission Standard for Hazardous Air Pollutants, 40CFR63, Subpart HHHHHH does not apply to this source.

1. 45CSR4 No person shall cause, suffer, allow, or permit the discharge of air pollutants which cause or contribute to objectionable odor at any location occupied by the public.

2. 45CSR7 45-7-4, 4.1. No person shall cause, suffer, allow, or permit particulate matter to be vented into the open air from any type source operation or duplicate source operation, or from all air pollution control equipment installed on any type source operation or duplicate source operation in excess of the quantity specified under the appropriate source operation type in Table 45-7A of the rule.

3. 45CSR13 requires the facility to operate within the limits of the permit and in accordance with the permit application.

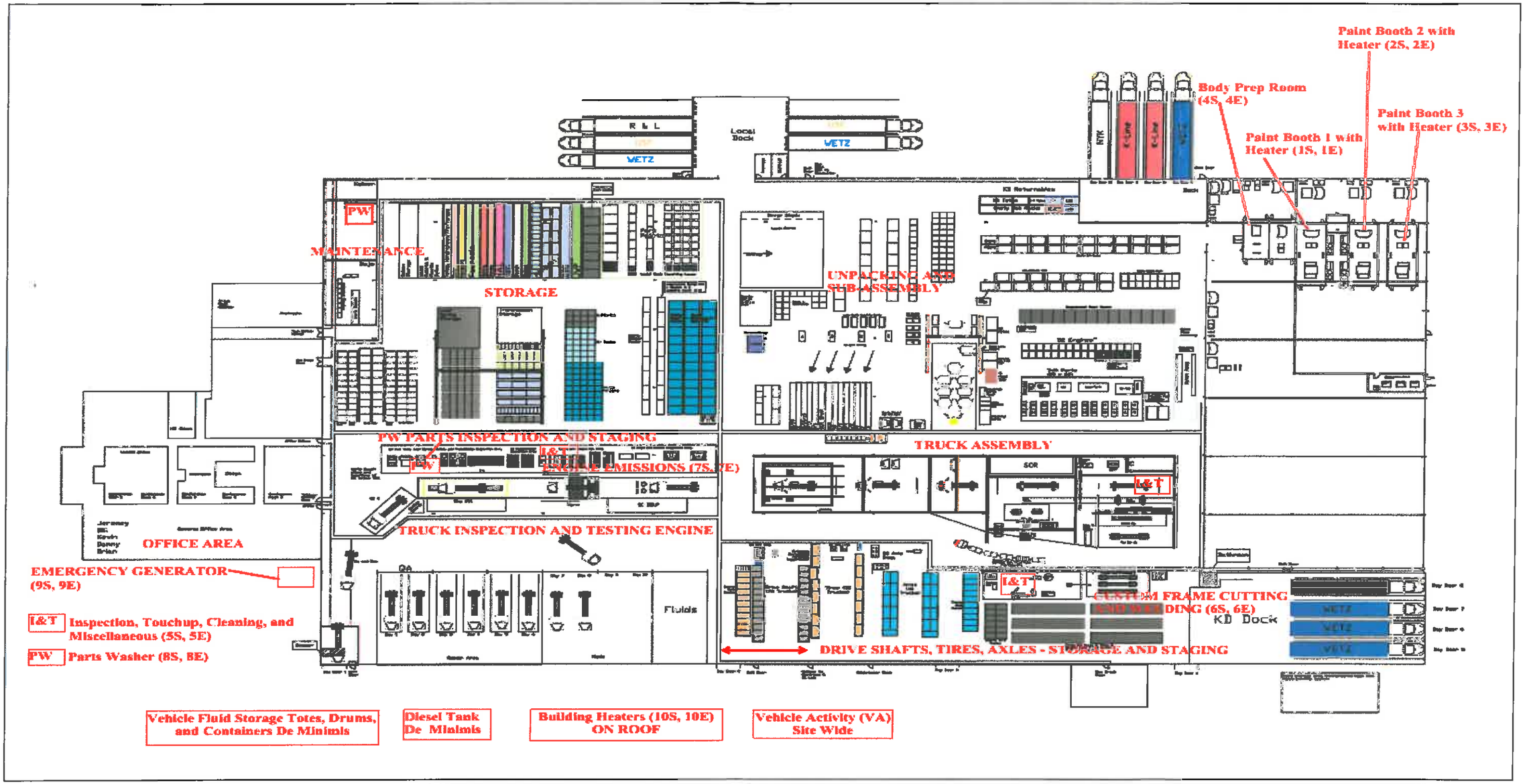
4. 45CSR21 requires a facility to utilize appropriate coatings and applies to Wood County. This facility is subject to Section 45-21-19, Coating of Miscellaneous Metal Parts. The paint and primer as applied meets the 3.5 lbs/gallon VOC limit and clear coal meets 42 lbs/gallon VOC limit.

5. 40CFR60, Subpart JJJJ, applies to engines and requires testing to verify of meeting emissions levels or certification. The engine in the emergency generator is certified by the Environmental Protection Agency.

6. 40CFR63, Subpart HHHHHH, for Paint Stripping and Miscellaneous Surface Coating Operations. This facility does not undertake the regulated paint stripping activity and does not qualify under the painting portion of the rule since it does not apply the target hazardous air pollutants (chromium, lead, manganese, nickel, or cadmium) under the miscellaneous surface coating category.

ATTACHMENT E

PLOT PLAN



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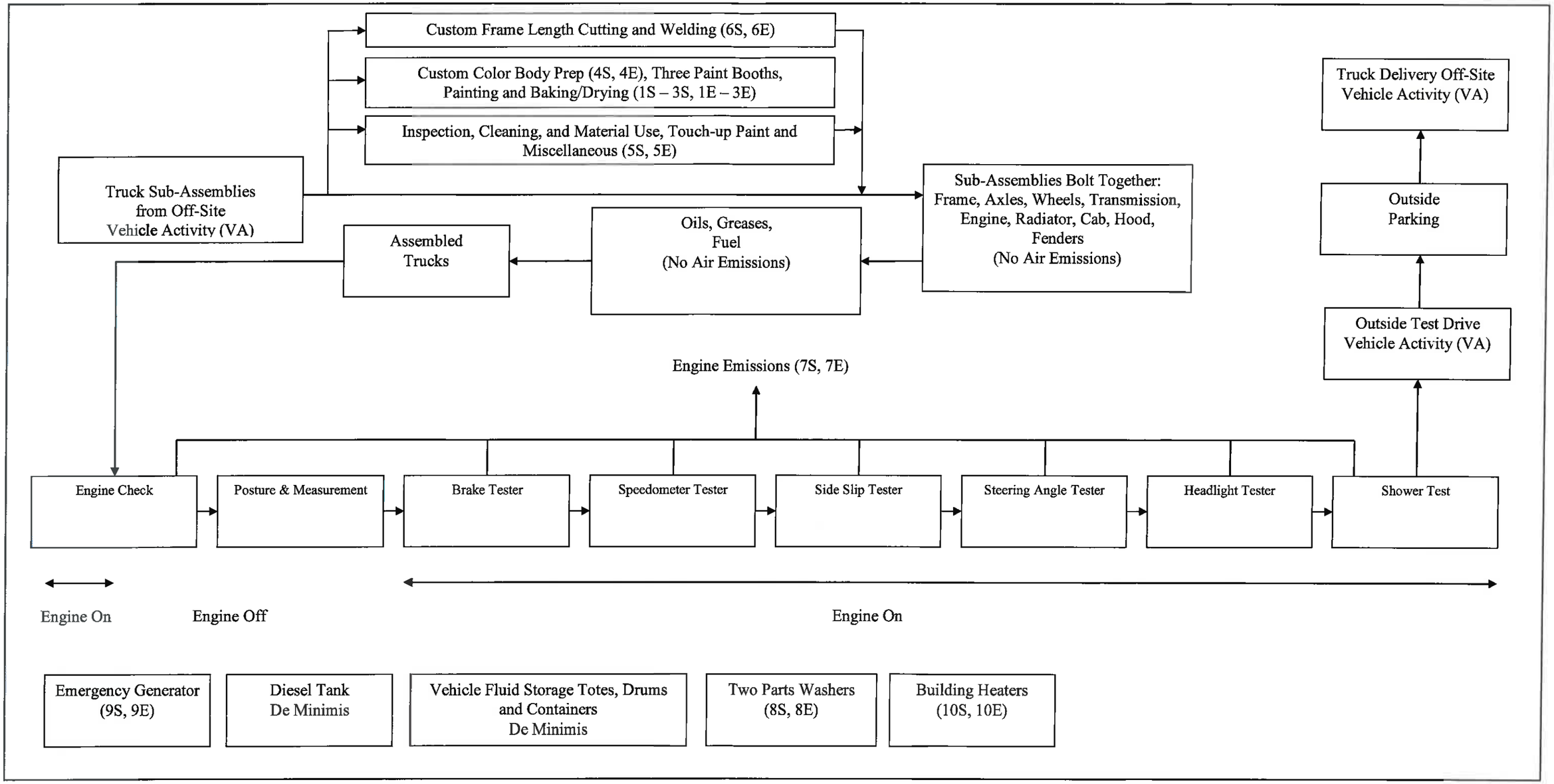
Hino Motors Manufacturing U.S.A., Inc.
Plot Plan
Wood County, West Virginia
Project No. 0101-14-0346-004

ATTACHMENT F

DETAILED PROCESS FLOW DIAGRAM



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Hino Motors Manufacturing U.S.A., Inc.
Process Flow Diagram
Wood County, West Virginia
Project No. 0101-14-0346-004

ATTACHMENT G

PROCESS DESCRIPTION

ATTACHMENT G

PROCESS DESCRIPTION

Hino Motors Manufacturing U.S.A., Inc. (HINO) installed a medium duty truck assembly plant in an existing building near Williamstown, West Virginia in 2007. The facility was approved for installation under a permit determination and therefore does not have an existing Regulation 13 permit. The standard color of the HINO trucks is white. The white truck cabs, fenders, and hood are delivered finished from other HINO operations or suppliers. Currently, other colors are painted off-site. HINO is now proposing to install a custom color operation which will allow custom colors application at the assembly facility. The painting operations trigger the need for permitting and this application includes a review of the current operation and facility to include the air emissions sources, including the proposed custom color operation.

Truck Assembly Description

HINO assembles medium duty trucks. Sub-assemblies arrive via truck from offsite. The trucks are assembled by building the frame (side members and cross pieces) and adding the axles, wheels and brake components. The transmission, engine and radiator are added, along with their peripheral equipment (tanks, wiring, pedals, clutch assembly, differential, drive train, steering components, etc.). The cab (as delivered, fully assembled), fenders and hood are the final components of the assembly process. The assembly does not include placement of the truck bed on the vehicle. Beds will be installed at other locations as required for the customers use. The sub-assemblies are units which bolt or otherwise are clipped or fastened together to form completed trucks. This is a mechanical assembly process which does not include gluing or adhesive application.

During assembly, fluids are added to the trucks. Typical motor vehicle fluids will be kept on hand for filling of the vehicles' parts. The anticipated materials are coolant fluids (antifreeze), diesel fuel, engine oil, transmission oil (manual and automatic transmissions), differential oil, power steering oil/fluid, brake oil/fluid, clutch oil/fluid, and greases for the steering, pedal assembly, clutch, parking brake control, and transmissions. These materials will be stored in the containers in which they are delivered (for example, 5 gallon pails, 55 gallon drums, totes, diesel in a 5,000 gallon tank). Storage of these materials and their placement into the vehicles is not expected to produce air emissions.

After fluid addition, the truck engines are tested as the vehicles move to an inspection area. With the engine switched off, the trucks are inspected for posture and measurement. The truck engines are restarted and the vehicles are tested by a brake tester, speedometer tester, side slip tester, steering angle tester, and a headlight tester. The trucks are then shower tested for water tightness of the windshield and windows. This operation will occur inside the facility and no venting of water vapor is to occur. The total engine run time for this process (engine testing and all subsequent testing) is approximately 40 minutes inside the facility

The following are the identified emission sources at this facility:

Custom Color Operation

Equipment - Paint Booths with Heaters (1S-3S) and Body Prep Area (4S)

The proposed custom color operation will initially include two paint booths with heaters and a body prep area. A third paint booth is proposed for future operations. The white paint will be prepped in the body prep area to allow the custom color to adhere to the existing paint. This operation will be a scuffing type operation to remove the glossy finish of the existing paint. The body of the truck will then be moved into the paint booths and the custom color (primer, paint, and clearcoat) will be applied. Although the initial operation will include mostly custom color application and not a complete body painting, the request herein is to allow for a quantity of primer, paint, and clearcoat (approximately one gallon of each per vehicle) to allow for approximately 5,000 truck cabs to be painted, whether it is a complete paint job or custom color application. We are not requesting a limit on the amount of trucks to be painted but a limit on the amount of materials used in the painting operation. Therefore, if less paint is used on a body, then the total number of bodies to be repainted may be higher than 5,000 per year.

The painting sequence will be intermittent with the application of a coating, then a 15 minute tack time prior to the next coating application. After the clear coat has been applied, the paint booths will be closed and the temperature will be raised to accelerate drying. For the emissions estimate, it is assumed that the entire process can occur in one hour. The actual time may be longer due to the need to apply at least two color layers and two clearcoat layers with the 15 minute tack time between the applications of each layer. The drying time is anticipated to last approximately 30 minutes. This group also includes paint mixing.

Miscellaneous Touch-Up, Cleaning, and Material Use (5S)

Equipment - Various uses of aerosol and other paints to touch up scratches during inspections, cleaners for the painting operations, and materials which contain VOCs and HAPs that are used on the assembly floor

HINO receives parts from numerous suppliers which are shipped in wrapped and stored at the site. The main two colors that are used for touch up are black and white (since this is the current major color scheme). The frame and other major parts under the body are painted black. The current main color for the body is white. The facility uses Rustoleum products for touch up at the inspection stations. These paints are only anticipated to release VOC from the facility. Additionally, at the beginning of the assembly line there is a pot sprayer with Asian paint. This paint is VOC free. Other products are used, such as a rubberized undercoating, Magnaflux Spotcheck, WD-40, brakleen, and cleaners for the painting operation. The VOC and HAP constituents of these materials are anticipated to be released from the building.

Welding (6S)

Equipment - Welders

Welding occurs when the facility shortens a wheel base for the trucks. The frames are cut with a saw and then the ends need to be refinished to replace the endcaps on the frames. Welding emissions are based on the worst case emissions estimate from each type of welding electrode in AP-42, Section 12.19-2.

Truck Engine Emissions (7S)

Equipment - Assembled Vehicles on the Inspection Line

After assembly is completed on a vehicle they are inspected. The inspection has several steps (see the process flow diagram) where the engine is on or off depending on what is being inspected. The emissions from the engines are based on certified manufacturers emissions, AP-42, and an approximate run time of 40 minutes per engine. Once the trucks leave the building, they are mobile equipment and the engine emissions are not counted toward the potential to emit.

Parts Washers (8S)

Equipment - Parts Washer (2)

Two parts washers are located at the site. There is one in the maintenance area and one in the inspection area. The emissions from the parts washers are based on AP-42. Fluids are only refreshed as needed.

Emergency Generator (9S)

Equipment - Generac QuietSource 22 KW

There is an emergency generator to power the emergency lights and office operations should a power failure occur. The generator is not sized to power the facility during power disruptions. The emergency generator is a natural gas fueled 40 horsepower engine and is certified under 40CFR60, Subpart JJJJ. Emissions are based on manufacturer's emissions and AP-42.

Building Heaters (10S)

Equipment - Multiple Trane, Lennox, Reznor, and Horizon Natural Gas Fueled Heaters

There are 33 building heaters at the site. The building had existing heaters when HINO moved into the site. There are 29 existing heaters with heat ratings ranging from 120,000 Btu/hr up to 800,000 Btu/hr. The new addition, which will hold the custom color department, will include the addition of 4 new building heaters. The emissions from the heaters are based on the total heat

rating of the heaters and AP-42 emissions factors. The 29 existing heaters have a total heat rating of 16.21 MM Btu/hr. The new heaters have a total heat rating of 2.2 MM Btu/hr.

Vehicle Activity (VA)

Equipment - Assembled vehicles moving on paved and gravel surfaces and delivery vehicles on paved surfaces

Future estimates call for assembly of approximately 20,000 trucks. The trucks leave the assembly building and drive around the building to the gravel parking area. The trucks are then sold and driven off the gravel area for delivery to the customer.

Additionally, this facility receives the parts to assemble the trucks in shipping containers and other delivery trucks. These vehicles drive to either the unloading docks or to the container storage area at the back of the property. Delivery vehicles are on paved road surfaces while at the site.

AP-42 emissions estimate methods are used to determine the emissions.

ATTACHMENT H

MATERIAL SAFETY DATA SHEETS

1. Identification of the substance/mixture and of the company/undertaking

Product name	COLOR ATLAS WHITE	
Product code	CAS981	
Intended use	Coating for professional use	
	Axalta Coating Systems, LLC Applied Corporate Center 50 Applied Card Way, Suite 300 US Glen Mills, PA 19342	
Telephone	Product information	(855) 6-AXALTA
	Medical emergency	(855) 274-5698
	Transportation emergency	(800) 424-9300 (CHEMTREC)

2. Hazards identification

This preparation is hazardous per the following GHS criteria

GHS-Classification

Flammable liquids Category 3

Endpoints which are ""not classified"", ""cannot classified"" and ""not applicable"" are not shown

GHS-Labelling

Hazard symbols	
Signal word	Warning
Hazard statements	Flammable liquid and vapour.
Precautionary statements	Ground/bond container and receiving equipment. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Keep container tightly closed. Take precautionary measures against static discharge. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Wear protective gloves/ eye protection/ face protection. IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower. Store in a well-ventilated place. Keep cool. Dispose of contents/container in accordance with local regulations.

Other hazards which do not result in classification
None known.

The following percentage of the mixture consists of ingredient(s) with unknown acute toxicity:
7.4 %

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3. Composition/information on ingredients

Mixture of synthetic resins, pigments, and solvents

Components

CAS-No.	Chemical Name	Concentration	GHS Hazardous
13463-67-7	Titanium dioxide	37.2%	
No information available.	Acrylic polymer	10 - 20%	
69153-52-2	Polyester resin	5 - 10%	
67-64-1	Acetone	4 - 15%	√
123-86-4	Butyl acetate	4 - 15%	√
110-43-0	Methyl amyl ketone	4 - 15%	√
No information available.	Acrylic resin	1 - 5%	
21645-51-2	Aluminum hydroxide	1 - 5%	
7631-86-9	Amorphous silica	1 - 5%	
763-69-9	Ethyl 3-ethoxy propionate	1 - 4%	√
141-78-6	Ethyl acetate	1 - 4%	√
78-93-3	Methyl ethyl ketone	1 - 4%	√

OSHA Hazardous: Yes
* Assigned CAS No. - An official CAS No. does not exist. The CAS No. shown is for a similar chemical.

4. First aid measures

Eye contact
Remove contact lenses. Irrigate copiously with clean, fresh water for at least 15 minutes, holding the eyelids apart. Seek medical advice.

Skin contact
Do NOT use solvents or thinners. Take off all contaminated clothing immediately. Wash skin thoroughly with soap and water or use recognized skin cleanser. If skin irritation persists, call a physician.

Inhalation
Avoid inhalation of vapour or mist. Move to fresh air in case of accidental inhalation of vapours. If breathing is irregular or stopped, administer artificial respiration. If unconscious place in recovery position and seek medical advice. If symptoms persist, call a physician.

Ingestion
If swallowed, seek medical advice immediately and show this container or label. Do NOT induce vomiting. Keep at rest.

Most Important Symptoms/effects, acute and delayed

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Inhalation
Ingestion
May result in gastrointestinal distress.

Skin or eye contact
May cause irritation or burning of the eyes. Repeated or prolonged liquid contact may cause skin irritation with discomfort and dermatitis.

Indication of immediate medical attention and special treatment needed if necessary
No data available on the product. See section 3 and 11 for hazardous ingredients found in the product.

5. Firefighting measures

Suitable extinguishing media
Extinguishing media which shall not be used for safety reasons
High volume water jet

Hazardous combustion products
CO, CO2, smoke, and oxides of any heavy metals that are reported in "Composition, Information on Ingredients" section.

Fire and Explosion Hazards
Combustible liquid. When heated above the flashpoint, emits vapors which, when mixed with air, will burn if an ignition source is present. Fine mist or sprays could ignite at temperatures below the flashpoint.

Special Protective Equipment and Fire Fighting Procedures
Full protective flameproof clothing should be worn as appropriate. Wear self contained breathing apparatus for fire fighting if necessary. In the event of fire, cool tanks with water spray. Do not allow run-off from fire fighting to enter public sewer systems or public waterways.

6. Accidental release measures

Procedures for cleaning up spills or leaks
Ventilate area. If heated above the flashpoint, remove sources of ignition. Prevent skin and eye contact and breathing of vapor. Wear a properly fitted air-purifying respirator with organic vapor cartridges (NIOSH approved TC-23C), eye protection, gloves and protective clothing. Confine, remove with inert absorbent, and dispose of properly.

Environmental precautions
Do not let product enter drains. Notify the respective authorities in accordance with local law in the case of contamination of rivers, lakes or waste water systems.

7. Handling and storage

Precautions for safe handling
Observe label precautions. Keep away from heat, flame and other sources of ignition. When heated above its flash point, this must be handled as if it were a flammable liquid. Close container after each use. Do not transfer contents to bottles or unlabeled containers. Wash thoroughly after handling and before eating or smoking.
If material is a coating: do not sand, flame cut, braze or weld dry coating without a NIOSH approved air purifying respirator with particulate filters or appropriate ventilation, and gloves. Combustible dust clouds may be created where operations produce fine material (dust). Avoid formation of significant deposits of material as they may become airborne and form combustible dust clouds. Build up of fine material should be cleaned using gentle sweeping or vacuuming in accordance with best practices. Cleaning methods (e.g. compressed air) which can generate potentially combustible dust clouds should not be used.

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Advice on protection against fire and explosion
Solvent vapours are heavier than air and may spread along floors. Vapors may form explosive mixtures with air and will burn when an ignition source is present. Always keep in containers of same material as the original one. Never use pressure to empty container: container is not a pressure vessel. The accumulation of contaminated rags may result in spontaneous combustion. Good housekeeping standards and regular safe removal of waste materials will minimize the risks of spontaneous combustion and other fire hazards.

Storage
Requirements for storage areas and containers
Observe label precautions. Store in a dry, well ventilated place away from sources of heat, ignition and direct sunlight. No smoking. Prevent unauthorized access. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Advice on common storage
Store separately from oxidizing agents and strongly alkaline and strongly acidic materials.

OSHA/NFPA Storage Classification: II

8. Exposure controls/personal protection

Engineering controls and work practices
Provide adequate ventilation. This should be achieved by a good general extraction and -if practically feasible- by the use of a local exhaust ventilation. If these are not sufficient to maintain concentrations of particulates and solvent vapour below the OEL, suitable respiratory protection must be worn.

National occupational exposure limits

CAS-No.	Chemical Name	Source	Time	Type	Value	Note
13463-67-7	Titanium dioxide	OSHA	8 hr	TWA	15 mg/m3	Total Dust
		Dupont	8 & 12 hour	TWA	10 mg/m3	Total Dust
			8 & 12 hour	TWA	5 mg/m3	Respirable Dust
67-64-1	Acetone	ACGIH	15 min	STEL	750 ppm	
			8 hr	TWA	500 ppm	
		OSHA	8 hr	TWA	1,000 ppm	
		Dupont	8 & 12 hour	TWA	500 ppm	
123-86-4	Butyl acetate	ACGIH	15 min	STEL	200 ppm	
			8 hr	TWA	150 ppm	
		OSHA	8 hr	TWA	150 ppm	
110-43-0	Methyl amyl ketone	ACGIH	8 hr	TWA	50 ppm	
		OSHA	8 hr	TWA	100 ppm	
21645-51-2	Aluminum hydroxide	ACGIH	8 hr	TWA	1 mg/m3	
7631-86-9	Amorphous silica	ACGIH	8 hr	TWA	3 mg/m3	Respirable Dust
		OSHA	8 hr	TWA	20 mppcf	

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CAS-No.	Chemical Name	Source	Time	Type	Value	Note
		Dupont	8 hr	PEL	3 mg/m3	
			8 hr	TWA	6 mg/m3	
141-78-6	Ethyl acetate	ACGIH	8 hr	TWA	400 ppm	
		OSHA	8 hr	TWA	400 ppm	
78-93-3	Methyl ethyl ketone	ACGIH	15 min	STEL	300 ppm	
			8 hr	TWA	200 ppm	
		OSHA	8 hr	TWA	200 ppm	
		Dupont	15 min	TWA	300 ppm	
			8 & 12 hour	TWA	200 ppm	

** TWA = Time-weighted average.
STEL = Short term exposure limit.
PEL = Permissible Exposure Limit.

Protective equipment
Personal protective equipment should be worn to prevent contact with eyes, skin or clothing.

Respiratory protection
Do not breathe vapors or mists. Wear an appropriate, properly fitted NIOSH approved respirator during application and until all vapors and spray mists are exhausted unless air monitoring demonstrates vapor/mist levels are below applicable limits. If respirators are required, use a properly fitted air-purifying respirator with organic vapor cartridges (NIOSH approved TC-23C) and particulate filter (NIOSH TC-84A). In confined spaces, or in situations where continuous spray operations are typical, or if proper air-purifying respirator fit is not possible, wear a positive pressure, supplied-air respirator (NIOSH TC-19C). In all cases, follow respirator manufacturer's directions for respirator use.'

Eye protection
Desirable in all industrial situations. Goggles are preferred to prevent eye irritation. If safety glasses are substituted, include splash guard or side shields.

Skin and body protection
Neoprene gloves and coveralls are recommended.

Hygiene measures
Wash skin thoroughly with soap and water or use recognized skin cleanser. Do NOT use solvents or thinners.

Environmental exposure controls
Do not let product enter drains. For ecological information, refer to Ecological Information Section 12.

9. Physical and chemical properties

Appearance

Form: liquid Colour:

Flash point	104 °F

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Ignition temperature	377 °C	
Lower Explosive Limit	1.1 %	
Upper Explosive Limit	10.3 %	
Evapouration rate	Slower than Ether	
Vapor pressure of principal solvent	19.1 hPa	
Water solubility	moderate	
Vapor density of principal solvent (Air = 1)	4	
Approx. Boiling Range	152 °C	
Approx. Freezing Range	Not applicable.	
Gallon Weight (lbs/gal)	11.46	
Specific Gravity	1.37	
Percent Volatile By Volume	54.89%	
Percent Volatile By Weight	34.06%	
Percent Solids By Volume	45.11%	
Percent Solids By Weight	65.94%	
pH (waterborne systems only)	Not applicable.	
Partition coefficient: n-octanol/water	no data available	
Ignition temperature	377 °C	DIN 51794
Decomposition temperature		
Viscosity (23 °C)	Not applicable.	ISO 2431-1993
VOC* less exempt (lbs/gal)	3.7	
VOC* as packaged (lbs/gal)	3.4	

* VOC less exempt (theoretical) and VOC as packaged (theoretical) are based upon the VOC of the packaged material at the point of manufacture.

10. Stability and reactivity

Stability
Stable

Conditions to avoid
Stable under recommended storage conditions.

Materials to avoid
None reasonably foreseeable.

Hazardous decomposition products
When exposed to high temperatures may produce hazardous decomposition products such as carbon monoxide and dioxide, smoke, oxides of nitrogen.

Hazardous Polymerization
Will not occur.

Sensitivity to Static Discharge
If heated above the flash point, solvent vapors in air may explode if static grounding and bonding is not used during transfer of this product.

Sensitivity to Mechanical Impact
None known.

11. Toxicological information

Information on likely routes of exposure

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Inhalation
Ingestion
May result in gastrointestinal distress.

Skin or eye contact
May cause irritation or burning of the eyes. Repeated or prolonged liquid contact may cause skin irritation with discomfort and dermatitis.

Delayed and immediate effects and also chronic effects from short and long term exposure:

Acute oral toxicity
not hazardous

Acute dermal toxicity
not hazardous

Acute inhalation toxicity
not hazardous

% of unknown composition 7.4 %

Skin corrosion/irritation
Not classified according to GHS criteria

Serious eye damage/eye irritation
Not classified according to GHS criteria

Respiratory sensitisation
Not classified according to GHS criteria

Skin sensitisation
Not classified according to GHS criteria

Germ cell mutagenicity
Not classified according to GHS criteria

Carcinogenicity
Not classified according to GHS criteria

Toxicity for reproduction
Not classified according to GHS criteria

Target Organ Systemic Toxicant - Single exposure
Not classified according to GHS criteria

Target Organ Systemic Toxicant - Repeated exposure
Not classified according to GHS criteria

Aspiration toxicity
Not classified according to GHS criteria

Numerical measures of toxicity (acute toxicity estimation (ATE),etc.)
No information available.

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Symptoms related to the physical, chemical and toxicological characteristics
Exposure to component solvents vapours concentration in excess of the stated occupational exposure limit may result in adverse health effect such as mucous membrane and respiratory system irritation and adverse effect on kidney, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness. Through skin resorbtion, solvents can cause some of the effects described here. Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin resulting in non-allergic contact dermatitis and absorption through the skin. The liquid splashed in the eyes may cause irritation and reversible damage.

Whether the hazardous chemical is listed by NTP, IARC or OSHA

Titanium dioxide IARC 2B

12. Ecological information

There are no data available on the product itself. The product should not be allowed to enter drains or watercourses.

13. Disposal considerations

Waste Disposal Method
Do not allow material to contaminate ground water systems. Incinerate or otherwise dispose of waste material in accordance with Federal, State, Provincial, and local requirements. Do not incinerate in closed containers.

14. Transport information

International transport regulations

IMDG (Sea transport)

UN number:	1263
Proper shipping name:	PAINT
Hazard Class:	3
Subsidiary Hazard Class:	Not applicable.
Packing group:	III
Marine Pollutant:	no

ICAO/IATA (Air transport)

UN number:	1263
Proper shipping name:	PAINT
Hazard Class:	3
Subsidiary Hazard Class:	Not applicable.
Packing group:	III

DOT

UN number:	1263
Proper shipping name:	PAINT
Hazard Class:	3
Subsidiary Hazard Class:	Not applicable.
Packing group:	III
Marine Pollutant:	no
EmS:	F-E,S-E

Matters needing attention for transportation
Confirm that there is no breakage, corrosion, or leakage from the container before shipping. Be sure to prevent damage to cargo by loading so as to avoid falling, dropping, or collapse. Ship in appropriate containers with denotation of the content in accordance with the relevant statutes and rules.

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15. Regulatory information

TSCA Status
In compliance with TSCA Inventory requirements for commercial purposes.

DSL Status
Product is not DSL listed because one or more ingredients are not on the DSL inventory.

Photochemical Reactivity
Non-photochemically reactive

Regulatory information

		EPCRA					CERCLA	CAA
CAS #	Ingredient	302	TPQ	RQ	311 - 312	313	RQ(lbs)	HAP
13463-67-7	Titanium dioxide	N	NR	NR	,A,C,F,N,R	N	NR	N
No information available.	Acrylic polymer	N	NR	NR	NA	N	NR	N
69153-52-2	Polyester resin	N	NR	NR	NA	N	NR	N
67-64-1	Acetone	N	NR	NR	A,C,F	N	5,000	N
123-86-4	Butyl acetate	N	NR	NR	A,C,F	N	NR	N
110-43-0	Methyl amyl ketone	N	NR	NR	A,C,F	N	NR	N
No information available.	Acrylic resin	N	NR	NR	NA	N	NR	N
21645-51-2	Aluminum hydroxide	N	NR	NR	,A,C,F,N,R	N	NR	N
7631-86-9	Amorphous silica	N	NR	NR	,A,C,F,N,R	N	NR	N
763-69-9	Ethyl 3-ethoxy propionate	N	NR	NR	NA	N	NR	N
141-78-6	Ethyl acetate	N	NR	NR	C,F	N	NR	N
78-93-3	Methyl ethyl ketone	N	NR	NR	A,C,F	N	5,000	N

Key:

EPCRA	Emergency Planning and Community Right-to-know Act (aka Title III, SARA)
302	Extremely hazardous substances
311/312 Categories	F = Fire Hazard R = Reactivity Hazard P = Pressure Related Hazard A = Acute Hazard C = Chronic Hazard
313 Information	Section 313 Supplier Notification - The chemicals listed above with a 'Y' in the 313 column are subject to reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know act of 1986 and of 40 CFR 372.
CERCLA	Comprehensive Emergency Response, Compensation and Liability Act of 1980.
HAP	Listed as a Clean Air Act Hazardous Air Pollutant.
TPQ	Threshold Planning Quantity.
RQ	Reportable Quantity
NA	not available
NR	not regulated

16. Other information

HMIS rating H: 2 F: 2 R: 0

Glossary of Terms:

ACGIH	American Conference of Governmental Industrial Hygienists.
IARC	International Agency for Research on Cancer.

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NTP	National Toxicology Program.
OEL	Occupational Exposure Limit
OSHA	Occupational Safety and Health Administration.
STEL	Short term exposure limit.
TWA	Time-weighted average.
PNOR	Particles not otherwise regulated.
PNOC	Particles not otherwise classified.

NOTE: The list (above) of glossary terms may be modified.

Notice from Axalta Coating Systems
The document reflects information provided to Axalta Coating Systems by its suppliers. Information is accurate to the best of our knowledge and is subject to change as new data is received by Axalta Coating Systems. Persons receiving this information should make their own determination as to its suitability for their purposes prior to use. The information on this Material Safety Data Sheet relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process.
SDS prepared by:
Axalta Coating Systems Regulatory Affairs
Report version

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1. Identification of the substance/mixture and of the company/undertaking

Product name	COLOR ATLAS BLACK	
Product code	CAS993	
Intended use	Coating for professional use	
	Axalta Coating Systems, LLC Applied Corporate Center 50 Applied Card Way, Suite 300 US Glen Mills, PA 19342	
Telephone	Product information	(855) 6-AXALTA
	Medical emergency	(855) 274-5698
	Transportation emergency	(800) 424-9300 (CHEMTREC)

2. Hazards identification

This preparation is hazardous per the following GHS criteria

GHS-Classification

Flammable liquids	Category 3
Serious eye damage/eye irritation	Category 2A

Endpoints which are ""not classified"", ""cannot classified"" and ""not applicable"" are not shown

GHS-Labelling

Hazard symbols	
Signal word	Warning
Hazard statements	Flammable liquid and vapour. Causes serious eye irritation.
Precautionary statements	Wear eye protection/ face protection. Ground/bond container and receiving equipment. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Keep container tightly closed. Take precautionary measures against static discharge. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Wear protective gloves/ eye protection/ face protection. If eye irritation persists: Get medical advice/ attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower. Store in a well-ventilated place. Keep cool. Dispose of contents/container in accordance with local regulations.

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Other hazards which do not result in classification
None known.

The following percentage of the mixture consists of ingredient(s) with unknown acute toxicity:
13.5 %

3. Composition/information on ingredients

Mixture of synthetic resins, pigments, and solvents

Components

CAS-No.	Chemical Name	Concentration	GHS Hazardous
No information available.	Acrylic polymer	20 - 30%	
69153-52-2	Polyester resin	10 - 20%	
67-64-1	Acetone	4 - 15%	√
123-86-4	Butyl acetate	4 - 15%	√
141-78-6	Ethyl acetate	4 - 15%	√
110-43-0	Methyl amyl ketone	4 - 15%	√
78-93-3	Methyl ethyl ketone	4 - 15%	√
No information available.	Acrylic resin	1 - 5%	
92797-60-9	Amorphous silica	1 - 5%	
763-69-9	Ethyl 3-ethoxy propionate	1 - 4%	√
67-63-0	Isopropyl alcohol	1 - 4%	√
169276-18-0*	Synthetic resin	1 - 5%	
13463-67-7	Titanium dioxide	1.7%	
1333-86-4	Carbon black	0.8%	

OSHA Hazardous: Yes
* Assigned CAS No. - An official CAS No. does not exist. The CAS No. shown is for a similar chemical.

4. First aid measures

Eye contact
Remove contact lenses. Irrigate copiously with clean, fresh water for at least 15 minutes, holding the eyelids apart. Seek medical advice.

Skin contact
Do NOT use solvents or thinners. Take off all contaminated clothing immediately. Wash skin thoroughly with soap and water or use recognized skin cleanser. If skin irritation persists, call a physician.

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Inhalation
Avoid inhalation of vapour or mist. Move to fresh air in case of accidental inhalation of vapours. If breathing is irregular or stopped, administer artificial respiration. If unconscious place in recovery position and seek medical advice. If symptoms persist, call a physician.

Ingestion
If swallowed, seek medical advice immediately and show this container or label. Do NOT induce vomiting. Keep at rest.

Most Important Symptoms/effects, acute and delayed

Inhalation
Ingestion
May result in gastrointestinal distress.

Skin or eye contact
May cause irritation or burning of the eyes. Repeated or prolonged liquid contact may cause skin irritation with discomfort and dermatitis.

Indication of immediate medical attention and special treatment needed if necessary
No data available on the product. See section 3 and 11 for hazardous ingredients found in the product.

5. Firefighting measures

Suitable extinguishing media
Extinguishing media which shall not be used for safety reasons
High volume water jet

Hazardous combustion products
CO, CO2, smoke, and oxides of any heavy metals that are reported in "Composition, Information on Ingredients" section.

Fire and Explosion Hazards
Combustible liquid. When heated above the flashpoint, emits vapors which, when mixed with air, will burn if an ignition source is present. Fine mist or sprays could ignite at temperatures below the flashpoint.

Special Protective Equipment and Fire Fighting Procedures
Full protective flameproof clothing should be worn as appropriate. Wear self contained breathing apparatus for fire fighting if necessary. In the event of fire, cool tanks with water spray. Do not allow run-off from fire fighting to enter public sewer systems or public waterways.

6. Accidental release measures

Procedures for cleaning up spills or leaks
Ventilate area. If heated above the flashpoint, remove sources of ignition. Prevent skin and eye contact and breathing of vapor. Wear a properly fitted air-purifying respirator with organic vapor cartridges (NIOSH approved TC-23C), eye protection, gloves and protective clothing. Confine, remove with inert absorbent, and dispose of properly.

Environmental precautions
Do not let product enter drains. Notify the respective authorities in accordance with local law in the case of contamination of rivers, lakes or waste water systems.

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7. Handling and storage

Precautions for safe handling
Observe label precautions. Keep away from heat, flame and other sources of ignition. When heated above its flash point, this must be handled as if it were a flammable liquid. Close container after each use. Do not transfer contents to bottles or unlabeled containers. Wash thoroughly after handling and before eating or smoking.
If material is a coating: do not sand, flame cut, braze or weld dry coating without a NIOSH approved air purifying respirator with particulate filters or appropriate ventilation, and gloves. Combustible dust clouds may be created where operations produce fine material (dust). Avoid formation of significant deposits of material as they may become airborne and form combustible dust clouds. Build up of fine material should be cleaned using gentle sweeping or vacuuming in accordance with best practices. Cleaning methods (e.g. compressed air) which can generate potentially combustible dust clouds should not be used.

Advice on protection against fire and explosion
Solvent vapours are heavier than air and may spread along floors. Vapors may form explosive mixtures with air and will burn when an ignition source is present. Always keep in containers of same material as the original one. Never use pressure to empty container: container is not a pressure vessel. The accumulation of contaminated rags may result in spontaneous combustion. Good housekeeping standards and regular safe removal of waste materials will minimize the risks of spontaneous combustion and other fire hazards.

Storage
Requirements for storage areas and containers
Observe label precautions. Store in a dry, well ventilated place away from sources of heat, ignition and direct sunlight. No smoking. Prevent unauthorized access. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Advice on common storage
Store separately from oxidizing agents and strongly alkaline and strongly acidic materials.

OSHA/NFPA Storage Classification: II

8. Exposure controls/personal protection

Engineering controls and work practices
Provide adequate ventilation. This should be achieved by a good general extraction and -if practically feasible- by the use of a local exhaust ventilation. If these are not sufficient to maintain concentrations of particulates and solvent vapour below the OEL, suitable respiratory protection must be worn.

National occupational exposure limits

CAS-No.	Chemical Name	Source	Time	Type	Value	Note
67-64-1	Acetone	ACGIH	15 min	STEL	750 ppm	
			8 hr	TWA	500 ppm	
		OSHA	8 hr	TWA	1,000 ppm	
		Dupont	8 & 12 hour	TWA	500 ppm	
123-86-4	Butyl acetate	ACGIH	15 min	STEL	200 ppm	
			8 hr	TWA	150 ppm	
		OSHA	8 hr	TWA	150 ppm	
141-78-6	Ethyl acetate	ACGIH	8 hr	TWA	400 ppm	
		OSHA	8 hr	TWA	400 ppm	
110-43-0	Methyl amyl ketone	ACGIH	8 hr	TWA	50 ppm	

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CAS-No.	Chemical Name	Source	Time	Type	Value	Note
		OSHA	8 hr	TWA	100 ppm	
78-93-3	Methyl ethyl ketone	ACGIH	15 min	STEL	300 ppm	
			8 hr	TWA	200 ppm	
		OSHA	8 hr	TWA	200 ppm	
		Dupont	15 min	TWA	300 ppm	
			8 & 12 hour	TWA	200 ppm	
92797-60-9	Amorphous silica	ACGIH	8 hr	TWA	2 mg/m3	Respirable Dust
		OSHA	15 min	STEL	1 mg/m3	
		Dupont	8 hr	TWA	1 mg/m3	
13463-67-7	Titanium dioxide	OSHA	8 hr	TWA	15 mg/m3	Total Dust
		Dupont	8 & 12 hour	TWA	10 mg/m3	Total Dust
			8 & 12 hour	TWA	5 mg/m3	Respirable Dust
1333-86-4	Carbon black	ACGIH	8 hr	TWA	3 mg/m3	
		OSHA	8 hr	TWA	3.5 mg/m3	
		Dupont	8 & 12 hour	TWA	0.5 mg/m3	

** STEL = Short term exposure limit.
TWA = Time-weighted average.

Protective equipment
Personal protective equipment should be worn to prevent contact with eyes, skin or clothing.

Respiratory protection
Do not breathe vapors or mists. Wear an appropriate, properly fitted NIOSH approved respirator during application and until all vapors and spray mists are exhausted unless air monitoring demonstrates vapor/mist levels are below applicable limits. If respirators are required, use a properly fitted air-purifying respirator with organic vapor cartridges (NIOSH approved TC-23C) and particulate filter (NIOSH TC-84A). In confined spaces, or in situations where continuous spray operations are typical, or if proper air-purifying respirator fit is not possible, wear a positive pressure, supplied-air respirator (NIOSH TC-19C). In all cases, follow respirator manufacturer's directions for respirator use.'

Eye protection
Desirable in all industrial situations. Goggles are preferred to prevent eye irritation. If safety glasses are substituted, include splash guard or side shields.

Skin and body protection
Neoprene gloves and coveralls are recommended.

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Hygiene measures
Wash skin thoroughly with soap and water or use recognized skin cleanser. Do NOT use solvents or thinners.

Environmental exposure controls
Do not let product enter drains. For ecological information, refer to Ecological Information Section 12.

9. Physical and chemical properties

Appearance

Form: liquid Colour:

Flash point	104 °F	
Ignition temperature	377 °C	
Lower Explosive Limit	1.1 %	
Upper Explosive Limit	12.8 %	
Evapouration rate	Slower than Ether	
Vapor pressure of principal solvent	31.0 hPa	
Water solubility	appreciable	
Vapor density of principal solvent (Air = 1)	3.9	
Approx. Boiling Range	152 °C	
Approx. Freezing Range	Not applicable.	
Gallon Weight (lbs/gal)	8.2	
Specific Gravity	0.98	
Percent Volatile By Volume	56.73%	
Percent Volatile By Weight	48.47%	
Percent Solids By Volume	43.27%	
Percent Solids By Weight	51.53%	
pH (waterborne systems only)	Not applicable.	
Partition coefficient: n-octanol/water	no data available	
Ignition temperature	377 °C	DIN 51794
Decomposition temperature		
Viscosity (23 °C)	Not applicable.	ISO 2431-1993
VOC* less exempt (lbs/gal)	3.7	
VOC* as packaged (lbs/gal)	3.3	

* VOC less exempt (theoretical) and VOC as packaged (theoretical) are based upon the VOC of the packaged material at the point of manufacture.

10. Stability and reactivity

Stability
Stable

Conditions to avoid
Stable under recommended storage conditions.

Materials to avoid
None reasonably foreseeable.

Hazardous decomposition products
When exposed to high temperatures may produce hazardous decomposition products such as carbon monoxide and dioxide, smoke, oxides of nitrogen.

Hazardous Polymerization
Will not occur.

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Sensitivity to Static Discharge
If heated above the flash point, solvent vapors in air may explode if static grounding and bonding is not used during transfer of this product.

Sensitivity to Mechanical Impact
None known.

11. Toxicological information

Information on likely routes of exposure

Inhalation
Ingestion
May result in gastrointestinal distress.

Skin or eye contact
May cause irritation or burning of the eyes. Repeated or prolonged liquid contact may cause skin irritation with discomfort and dermatitis.

Delayed and immediate effects and also chronic effects from short and long term exposure:

Acute oral toxicity
not hazardous

Acute dermal toxicity
not hazardous

Acute inhalation toxicity
not hazardous

% of unknown composition 13.5 %

Skin corrosion/irritation
Not classified according to GHS criteria

Serious eye damage/eye irritation

acetone	Category 2A
ethyl acetate	Category 2A
heptan-2-one	Category 2B
butanone	Category 2A
propan-2-ol	Category 2A

Respiratory sensitisation
Not classified according to GHS criteria

Skin sensitisation
Not classified according to GHS criteria

Germ cell mutagenicity
Not classified according to GHS criteria

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Carcinogenicity
Not classified according to GHS criteria

Toxicity for reproduction
Not classified according to GHS criteria

Target Organ Systemic Toxicant - Single exposure
Not classified according to GHS criteria

Target Organ Systemic Toxicant - Repeated exposure
Not classified according to GHS criteria

Aspiration toxicity
Not classified according to GHS criteria

Numerical measures of toxicity (acute toxicity estimation (ATE),etc.)
No information available.

Symptoms related to the physical, chemical and toxicological characteristics
Exposure to component solvents vapours concentration in excess of the stated occupational exposure limit may result in adverse health effect such as mucous membrane and respiratory system irritation and adverse effect on kidney, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness. Through skin resorbtion, solvents can cause some of the effects described here. Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin resulting in non-allergic contact dermatitis and absorption through the skin. The liquid splashed in the eyes may cause irritation and reversible damage.

Whether the hazardous chemical is listed by NTP, IARC or OSHA

Titanium dioxide	IARC 2B
carbon black	IARC 2B

12. Ecological information

There are no data available on the product itself. The product should not be allowed to enter drains or watercourses.

13. Disposal considerations

Waste Disposal Method
Do not allow material to contaminate ground water systems. Incinerate or otherwise dispose of waste material in accordance with Federal, State, Provincial, and local requirements. Do not incinerate in closed containers.

14. Transport information

International transport regulations

IMDG (Sea transport)

UN number:	1263
Proper shipping name:	PAINT
Hazard Class:	3
Subsidiary Hazard Class:	Not applicable.
Packing group:	III
Marine Pollutant:	no

ICAO/IATA (Air transport)

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UN number:	1263
Proper shipping name:	PAINT
Hazard Class:	3
Subsidiary Hazard Class:	Not applicable.
Packing group:	III

DOT

UN number:	1263
Proper shipping name:	PAINT
Hazard Class:	3
Subsidiary Hazard Class:	Not applicable.
Packing group:	III
Marine Pollutant:	no
EmS:	F-E,S-E

Matters needing attention for transportation
Confirm that there is no breakage, corrosion, or leakage from the container before shipping. Be sure to prevent damage to cargo by loading so as to avoid falling, dropping, or collapse. Ship in appropriate containers with denotation of the content in accordance with the relevant statutes and rules.

15. Regulatory information

TSCA Status
In compliance with TSCA Inventory requirements for commercial purposes.

DSL Status
Product is not DSL listed because one or more ingredients are not on the DSL inventory.

Photochemical Reactivity
Non-photochemically reactive

US. California Safe Drinking Water & Toxic Enforcement Act (Proposition 65)
WARNING! This product contains a chemical known to the State of California to cause cancer.

Regulatory information

		EPCRA					CERCLA	CAA
CAS #	Ingredient	302	TPQ	RQ	311 - 312	313	RQ(lbs)	HAP
No information available.	Acrylic polymer	N	NR	NR	NA	N	NR	N
69153-52-2	Polyester resin	N	NR	NR	NA	N	NR	N
67-64-1	Acetone	N	NR	NR	A,C,F	N	5,000	N
123-86-4	Butyl acetate	N	NR	NR	A,C,F	N	NR	N
141-78-6	Ethyl acetate	N	NR	NR	C,F	N	NR	N
110-43-0	Methyl amyl ketone	N	NR	NR	A,C,F	N	NR	N
78-93-3	Methyl ethyl ketone	N	NR	NR	A,C,F	N	5,000	N
No information available.	Acrylic resin	N	NR	NR	NA	N	NR	N
92797-60-9	Amorphous silica	N	NR	NR	,A,C,F,N,R	N	NR	N
763-69-9	Ethyl 3-ethoxy propionate	N	NR	NR	NA	N	NR	N
67-63-0	Isopropyl alcohol	N	NR	NR	,A,C,F,N,R	N	NR	N
169276-18-0*	Synthetic resin	N	NR	NR	NA	N	NR	N
13463-67-7	Titanium dioxide	N	NR	NR	,A,C,F,N,R	N	NR	N
1333-86-4	Carbon black	N	NR	NR	,A,C,F,N,R	N	NR	N

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Key:

EPCRA	Emergency Planning and Community Right-to-know Act (aka Title III, SARA)
302	Extremely hazardous substances
311/312 Categories	F = Fire Hazard R = Reactivity Hazard P = Pressure Related Hazard A = Acute Hazard C = Chronic Hazard
313 Information	Section 313 Supplier Notification - The chemicals listed above with a 'Y' in the 313 column are subject to reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know act of 1986 and of 40 CFR 372.
CERCLA	Comprehensive Emergency Response, Compensation and Liability Act of 1980.
HAP	Listed as a Clean Air Act Hazardous Air Pollutant.
TPQ	Threshold Planning Quantity.
RQ	Reportable Quantity
NA	not available
NR	not regulated

16. Other information

HMIS rating H: 2 F: 2 R: 0

Glossary of Terms:

ACGIH	American Conference of Governmental Industrial Hygienists.
IARC	International Agency for Research on Cancer.
NTP	National Toxicology Program.
OEL	Occupational Exposure Limit
OSHA	Occupational Safety and Health Administration.
STEL	Short term exposure limit.
TWA	Time-weighted average.
PNOR	Particles not otherwise regulated.
PNOC	Particles not otherwise classified.

NOTE: The list (above) of glossary terms may be modified.

Notice from Axalta Coating Systems
The document reflects information provided to Axalta Coating Systems by its suppliers. Information is accurate to the best of our knowledge and is subject to change as new data is received by Axalta Coating Systems. Persons receiving this information should make their own determination as to its suitability for their purposes prior to use. The information on this Material Safety Data Sheet relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process.
SDS prepared by:
Axalta Coating Systems Regulatory Affairs
Report version

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1. Identification of the substance/mixture and of the company/undertaking

Product name	COLOR ATLAS RED	
Product code	CAS1037	
Intended use	Coating for professional use	
	Axalta Coating Systems, LLC Applied Corporate Center 50 Applied Card Way, Suite 300 US Glen Mills, PA 19342	
Telephone	Product information Medical emergency Transportation emergency	(855) 6-AXALTA (855) 274-5698 (800) 424-9300 (CHEMTREC)

2. Hazards identification

This preparation is hazardous per the following GHS criteria

GHS-Classification

Flammable liquids	Category 3
Serious eye damage/eye irritation	Category 2A

Endpoints which are ""not classified"", ""cannot classified"" and ""not applicable"" are not shown

GHS-Labelling

Hazard symbols	
Signal word	Warning
Hazard statements	Flammable liquid and vapour. Causes serious eye irritation.
Precautionary statements	Wear eye protection/ face protection. Ground/bond container and receiving equipment. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Keep container tightly closed. Take precautionary measures against static discharge. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Wear protective gloves/ eye protection/ face protection. If eye irritation persists: Get medical advice/ attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower. Store in a well-ventilated place. Keep cool. Dispose of contents/container in accordance with local regulations.

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Other hazards which do not result in classification
None known.

The following percentage of the mixture consists of ingredient(s) with unknown acute toxicity:
14.1 %

3. Composition/information on ingredients

Mixture of synthetic resins, pigments, and solvents

Components

CAS-No.	Chemical Name	Concentration	GHS Hazardous
No information available.	Acrylic polymer	20 - 30%	
123-86-4	Butyl acetate	15 - 26%	√
84632-65-5	C.i. pigment red 254	5 - 10%	
12236-62-3	Monoazo pigment	5 - 10%	
69153-52-2	Polyester resin	5 - 10%	
67-64-1	Acetone	4 - 15%	√
110-43-0	Methyl amyl ketone	4 - 15%	√
13463-67-7	Titanium dioxide	3.0%	
No information available.	Acrylic resin	1 - 5%	
763-69-9	Ethyl 3-ethoxy propionate	1 - 4%	√
141-78-6	Ethyl acetate	1 - 4%	√
67-63-0	Isopropyl alcohol	1 - 4%	√
78-93-3	Methyl ethyl ketone	1 - 4%	√
169276-18-0*	Synthetic resin	1 - 5%	

OSHA Hazardous: Yes
* Assigned CAS No. - An official CAS No. does not exist. The CAS No. shown is for a similar chemical.

4. First aid measures

Eye contact
Remove contact lenses. Irrigate copiously with clean, fresh water for at least 15 minutes, holding the eyelids apart. Seek medical advice.

Skin contact
Do NOT use solvents or thinners. Take off all contaminated clothing immediately. Wash skin thoroughly with soap and water or use recognized skin cleanser. If skin irritation persists, call a physician.

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Inhalation
Avoid inhalation of vapour or mist. Move to fresh air in case of accidental inhalation of vapours. If breathing is irregular or stopped, administer artificial respiration. If unconscious place in recovery position and seek medical advice. If symptoms persist, call a physician.

Ingestion
If swallowed, seek medical advice immediately and show this container or label. Do NOT induce vomiting. Keep at rest.

Most Important Symptoms/effects, acute and delayed

Inhalation
Ingestion
May result in gastrointestinal distress.

Skin or eye contact
May cause irritation or burning of the eyes. Repeated or prolonged liquid contact may cause skin irritation with discomfort and dermatitis.

Indication of Immediate medical attention and special treatment needed if necessary
No data available on the product. See section 3 and 11 for hazardous ingredients found in the product.

5. Firefighting measures

Suitable extinguishing media
Extinguishing media which shall not be used for safety reasons
High volume water jet

Hazardous combustion products
CO, CO2, smoke, and oxides of any heavy metals that are reported in "Composition, Information on Ingredients" section.

Fire and Explosion Hazards
Combustible liquid. When heated above the flashpoint, emits vapors which, when mixed with air, will burn if an ignition source is present. Fine mist or sprays could ignite at temperatures below the flashpoint.

Special Protective Equipment and Fire Fighting Procedures
Full protective flameproof clothing should be worn as appropriate. Wear self contained breathing apparatus for fire fighting if necessary. In the event of fire, cool tanks with water spray. Do not allow run-off from fire fighting to enter public sewer systems or public waterways.

6. Accidental release measures

Procedures for cleaning up spills or leaks
Ventilate area. If heated above the flashpoint, remove sources of ignition. Prevent skin and eye contact and breathing of vapor. Wear a properly fitted air-purifying respirator with organic vapor cartridges (NIOSH approved TC-23C), eye protection, gloves and protective clothing. Confine, remove with inert absorbent, and dispose of properly.

Environmental precautions
Do not let product enter drains. Notify the respective authorities in accordance with local law in the case of contamination of rivers, lakes or waste water systems.

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7. Handling and storage

Precautions for safe handling
Observe label precautions. Keep away from heat, flame and other sources of ignition. When heated above its flash point, this must be handled as if it were a flammable liquid. Close container after each use. Do not transfer contents to bottles or unlabeled containers. Wash thoroughly after handling and before eating or smoking.
If material is a coating: do not sand, flame cut, braze or weld dry coating without a NIOSH approved air purifying respirator with particulate filters or appropriate ventilation, and gloves. Combustible dust clouds may be created where operations produce fine material (dust). Avoid formation of significant deposits of material as they may become airborne and form combustible dust clouds. Build up of fine material should be cleaned using gentle sweeping or vacuuming in accordance with best practices. Cleaning methods (e.g. compressed air) which can generate potentially combustible dust clouds should not be used.

Advice on protection against fire and explosion
Solvent vapours are heavier than air and may spread along floors. Vapors may form explosive mixtures with air and will burn when an ignition source is present. Always keep in containers of same material as the original one. Never use pressure to empty container: container is not a pressure vessel. The accumulation of contaminated rags may result in spontaneous combustion. Good housekeeping standards and regular safe removal of waste materials will minimize the risks of spontaneous combustion and other fire hazards.

Storage
Requirements for storage areas and containers
Observe label precautions. Store in a dry, well ventilated place away from sources of heat, ignition and direct sunlight. No smoking. Prevent unauthorized access. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Advice on common storage
Store separately from oxidizing agents and strongly alkaline and strongly acidic materials.

OSHA/NFPA Storage Classification: II

8. Exposure controls/personal protection

Engineering controls and work practices
Provide adequate ventilation. This should be achieved by a good general extraction and -if practically feasible- by the use of a local exhaust ventilation. If these are not sufficient to maintain concentrations of particulates and solvent vapour below the OEL, suitable respiratory protection must be worn.

National occupational exposure limits

CAS-No.	Chemical Name	Source	Time	Type	Value	Note
123-86-4	Butyl acetate	ACGIH	15 min	STEL	200 ppm	
			8 hr	TWA	150 ppm	
		OSHA	8 hr	TWA	150 ppm	
12236-62-3	Monoazo pigment	ACGIH	8 hr	TWA	10 mg/m3	inhalable dust particulate
		OSHA	8 hr	TWA	15 mg/m3	Total Dust
			8 hr	TWA	5 mg/m3	Respirable Dust
67-64-1	Acetone	ACGIH	15 min	STEL	750 ppm	
			8 hr	TWA	500 ppm	
		OSHA	8 hr	TWA	1,000 ppm	

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CAS-No.	Chemical Name	Source	Time	Type	Value	Note
		Dupont	8 & 12 hour	TWA	500 ppm	
110-43-0	Methyl amyl ketone	ACGIH	8 hr	TWA	50 ppm	
		OSHA	8 hr	TWA	100 ppm	
13463-67-7	Titanium dioxide	OSHA	8 hr	TWA	15 mg/m3	Total Dust
		Dupont	8 & 12 hour	TWA	10 mg/m3	Total Dust
			8 & 12 hour	TWA	5 mg/m3	Respirable Dust
141-78-6	Ethyl acetate	ACGIH	8 hr	TWA	400 ppm	
		OSHA	8 hr	TWA	400 ppm	
78-93-3	Methyl ethyl ketone	ACGIH	15 min	STEL	300 ppm	
			8 hr	TWA	200 ppm	
		OSHA	8 hr	TWA	200 ppm	
		Dupont	15 min	TWA	300 ppm	
			8 & 12 hour	TWA	200 ppm	

** STEL = Short term exposure limit.
TWA = Time-weighted average.

Protective equipment
Personal protective equipment should be worn to prevent contact with eyes, skin or clothing.

Respiratory protection
Do not breathe vapors or mists. Wear an appropriate, properly fitted NIOSH approved respirator during application and until all vapors and spray mists are exhausted unless air monitoring demonstrates vapor/mist levels are below applicable limits. If respirators are required, use a properly fitted air-purifying respirator with organic vapor cartridges (NIOSH approved TC-23C) and particulate filter (NIOSH TC-84A). In confined spaces, or in situations where continuous spray operations are typical, or if proper air-purifying respirator fit is not possible, wear a positive pressure, supplied-air respirator (NIOSH TC-19C). In all cases, follow respirator manufacturer's directions for respirator use.'

Eye protection
Desirable in all industrial situations. Goggles are preferred to prevent eye irritation. If safety glasses are substituted, include splash guard or side shields.

Skin and body protection
Neoprene gloves and coveralls are recommended.

Hygiene measures
Wash skin thoroughly with soap and water or use recognized skin cleanser. Do NOT use solvents or thinners.

Environmental exposure controls
Do not let product enter drains. For ecological information, refer to Ecological Information Section 12.

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9. Physical and chemical properties

Appearance

Form: liquid Colour:

Flash point	104 °F	
Ignition temperature	320 °C	
Lower Explosive Limit	1.1 %	
Upper Explosive Limit	12.8 %	
Evapouration rate	Slower than Ether	
Vapor pressure of principal solvent	24.5 hPa	
Water solubility	appreciable	
Vapor density of principal solvent (Air = 1)	4	
Approx. Boiling Range	152 °C	
Approx. Freezing Range	Not applicable.	
Gallon Weight (lbs/gal)	8.68	
Specific Gravity	1.04	
Percent Volatile By Volume	54.74%	
Percent Volatile By Weight	44.49%	
Percent Solids By Volume	45.26%	
Percent Solids By Weight	55.51%	
pH (waterborne systems only)	Not applicable.	
Partition coefficient: n-octanol/water	no data available	
Ignition temperature	320 °C	DIN 51794
Decomposition temperature		
Viscosity (23 °C)	Not applicable.	ISO 2431-1993
VOC* less exempt (lbs/gal)	3.6	
VOC* as packaged (lbs/gal)	3.4	
VOC LE (TBAC)	3.6	
VOC AP (TBAC)	3.4	

* VOC less exempt (theoretical) and VOC as packaged (theoretical) are based upon the VOC of the packaged material at the point of manufacture.
TBAC is not universally recognized as an exempt solvent.
Users should consult the applicable regulations for their region.

10. Stability and reactivity

Stability
Stable

Conditions to avoid
Stable under recommended storage conditions.

Materials to avoid
None reasonably foreseeable.

Hazardous decomposition products
When exposed to high temperatures may produce hazardous decomposition products such as carbon monoxide and dioxide, smoke, oxides of nitrogen.

Hazardous Polymerization
Will not occur.

Sensitivity to Static Discharge
If heated above the flash point, solvent vapors in air may explode if static grounding and bonding is not used during transfer of this product.

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Sensitivity to Mechanical Impact
None known.

11. Toxicological information

Information on likely routes of exposure

Inhalation
Ingestion
May result in gastrointestinal distress.

Skin or eye contact
May cause irritation or burning of the eyes. Repeated or prolonged liquid contact may cause skin irritation with discomfort and dermatitis.

Delayed and immediate effects and also chronic effects from short and long term exposure:

Acute oral toxicity
not hazardous

Acute dermal toxicity
not hazardous

Acute inhalation toxicity
not hazardous

% of unknown composition 14.1 %

Skin corrosion/irritation
Not classified according to GHS criteria

Serious eye damage/eye irritation

acetone	Category 2A
heptan-2-one	Category 2B
ethyl acetate	Category 2A
propan-2-ol	Category 2A
butanone	Category 2A

Respiratory sensitisation
Not classified according to GHS criteria

Skin sensitisation
Not classified according to GHS criteria

Germ cell mutagenicity
Not classified according to GHS criteria

Carcinogenicity
Not classified according to GHS criteria

Toxicity for reproduction
Not classified according to GHS criteria

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Target Organ Systemic Toxicant - Single exposure
Not classified according to GHS criteria

Target Organ Systemic Toxicant - Repeated exposure
Not classified according to GHS criteria

Aspiration toxicity
Not classified according to GHS criteria

Numerical measures of toxicity (acute toxicity estimation (ATE),etc.)
No information available.

Symptoms related to the physical, chemical and toxicological characteristics
Exposure to component solvents vapours concentration in excess of the stated occupational exposure limit may result in adverse health effect such as mucous membrane and respiratory system irritation and adverse effect on kidney, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness. Through skin resorbtion, solvents can cause some of the effects described here. Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin resulting in non-allergic contact dermatitis and absorption through the skin. The liquid splashed in the eyes may cause irritation and reversible damage.

Whether the hazardous chemical is listed by NTP, IARC or OSHA

Titanium dioxide	IARC 2B

12. Ecological information

There are no data available on the product itself. The product should not be allowed to enter drains or watercourses. The product contains an organic linked halogen. It may contribute to the AOX-value.

13. Disposal considerations

Waste Disposal Method
Do not allow material to contaminate ground water systems. Incinerate or otherwise dispose of waste material in accordance with Federal, State, Provincial, and local requirements. Do not incinerate in closed containers.

14. Transport information

International transport regulations

IMDG (Sea transport)	
UN number:	1263
Proper shipping name:	PAINT
Hazard Class:	3
Subsidiary Hazard Class:	Not applicable.
Packing group:	III
Marine Pollutant:	no
ICAO/IATA (Air transport)	
UN number:	1263
Proper shipping name:	PAINT
Hazard Class:	3
Subsidiary Hazard Class:	Not applicable.
Packing group:	III

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DOT

UN number:	1263
Proper shipping name:	PAINT
Hazard Class:	3
Subsidiary Hazard Class:	Not applicable.
Packing group:	III
Marine Pollutant:	no
EmS:	F-E,S-E

Matters needing attention for transportation
Confirm that there is no breakage, corrosion, or leakage from the container before shipping. Be sure to prevent damage to cargo by loading so as to avoid falling, dropping, or collapse. Ship in appropriate containers with denotation of the content in accordance with the relevant statutes and rules.

15. Regulatory information

TSCA Status
In compliance with TSCA Inventory requirements for commercial purposes.

DSL Status
Product is not DSL listed because one or more ingredients are not on the DSL inventory.

Photochemical Reactivity
Non-photochemically reactive

Regulatory information

		EPCRA					CERCLA	CAA
CAS #	Ingredient	302	TPQ	RQ	311 - 312	313	RQ(lbs)	HAP
No information available.	Acrylic polymer	N	NR	NR	NA	N	NR	N
123-86-4	Butyl acetate	N	NR	NR	A,C,F	N	NR	N
84632-65-5	C.i. pigment red 254	N	NR	NR	,A,C,F,N,R	N	NR	N
12236-62-3	Monoazo pigment	N	NR	NR	,A,C,F,N,R	N	NR	N
69153-52-2	Polyester resin	N	NR	NR	NA	N	NR	N
67-64-1	Acetone	N	NR	NR	A,C,F	N	5,000	N
110-43-0	Methyl amyl ketone	N	NR	NR	A,C,F	N	NR	N
13463-67-7	Titanium dioxide	N	NR	NR	,A,C,F,N,R	N	NR	N
No information available.	Acrylic resin	N	NR	NR	NA	N	NR	N
763-69-9	Ethyl 3-ethoxy propionate	N	NR	NR	NA	N	NR	N
141-78-6	Ethyl acetate	N	NR	NR	C,F	N	NR	N
67-63-0	Isopropyl alcohol	N	NR	NR	,A,C,F,N,R	N	NR	N
78-93-3	Methyl ethyl ketone	N	NR	NR	A,C,F	N	5,000	N
169276-18-0*	Synthetic resin	N	NR	NR	NA	N	NR	N

Key:

EPCRA	Emergency Planning and Community Right-to-know Act (aka Title III, SARA)
302	Extremely hazardous substances
311/312 Categories	F = Fire Hazard R = Reactivity Hazard P = Pressure Related Hazard A = Acute Hazard C = Chronic Hazard
313 Information	Section 313 Supplier Notification - The chemicals listed above with a 'Y' in the 313 column are subject to reporting requirements of Section 313 of the Emergency Planning and Community

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	Right-to-Know act of 1986 and of 40 CFR 372.
CERCLA	Comprehensive Emergency Response, Compensation and Liability Act of 1980.
HAP	Listed as a Clean Air Act Hazardous Air Pollutant.
TPQ	Threshold Planning Quantity.
RQ	Reportable Quantity
NA	not available
NR	not regulated

16. Other information

HMIS rating H: 2 F: 2 R: 0

Glossary of Terms:

ACGIH	American Conference of Governmental Industrial Hygienists.
IARC	International Agency for Research on Cancer.
NTP	National Toxicology Program.
OEL	Occupational Exposure Limit
OSHA	Occupational Safety and Health Administration.
STEL	Short term exposure limit.
TWA	Time-weighted average.
PNOR	Particles not otherwise regulated.
PNOC	Particles not otherwise classified.

NOTE: The list (above) of glossary terms may be modified.

Notice from Axalta Coating Systems
The document reflects information provided to Axalta Coating Systems by its suppliers. Information is accurate to the best of our knowledge and is subject to change as new data is received by Axalta Coating Systems. Persons receiving this information should make their own determination as to its suitability for their purposes prior to use. The information on this Material Safety Data Sheet relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process.
SDS prepared by:
Axalta Coating Systems Regulatory Affairs
Report version

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MMRX-02457

1. Identification of the substance/mixture and of the company/undertaking

Product name	COLOR ATLAS WHITE	
Product code	CAS992	
Intended use	Coating for professional use	
	Axalta Coating Systems, LLC Applied Corporate Center 50 Applied Card Way, Suite 300 US Glen Mills, PA 19342	
Telephone	Product information Medical emergency Transportation emergency	(855) 6-AXALTA (855) 274-5698 (800) 424-9300 (CHEMTREC)

2. Hazards identification

This preparation is hazardous per the following GHS criteria

GHS-Classification

Flammable liquids Category 3

Endpoints which are ""not classified"", ""cannot classified"" and ""not applicable"" are not shown

GHS-Labelling

Hazard symbols	
Signal word	Warning
Hazard statements	Flammable liquid and vapour.
Precautionary statements	Ground/bond container and receiving equipment. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Keep container tightly closed. Take precautionary measures against static discharge. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Wear protective gloves/ eye protection/ face protection. IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower. Store in a well-ventilated place. Keep cool. Dispose of contents/container in accordance with local regulations.

Other hazards which do not result in classification
None known.

The following percentage of the mixture consists of ingredient(s) with unknown acute toxicity:
7.9 %

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3. Composition/information on ingredients

Mixture of synthetic resins, pigments, and solvents

Components

CAS-No.	Chemical Name	Concentration	GHS Hazardous
13463-67-7	Titanium dioxide	37.2%	
No information available.	Acrylic polymer	10 - 20%	
69153-52-2	Polyester resin	5 - 10%	
67-64-1	Acetone	4 - 15%	√
123-86-4	Butyl acetate	4 - 15%	√
110-43-0	Methyl amyl ketone	4 - 15%	√
No information available.	Acrylic resin	1 - 5%	
21645-51-2	Aluminum hydroxide	1 - 5%	
7631-86-9	Amorphous silica	1 - 5%	
763-69-9	Ethyl 3-ethoxy propionate	1 - 4%	√
141-78-6	Ethyl acetate	1 - 4%	√
78-93-3	Methyl ethyl ketone	1 - 4%	√

OSHA Hazardous: Yes
* Assigned CAS No. - An official CAS No. does not exist. The CAS No. shown is for a similar chemical.

4. First aid measures

Eye contact
Remove contact lenses. Irrigate copiously with clean, fresh water for at least 15 minutes, holding the eyelids apart. Seek medical advice.

Skin contact
Do NOT use solvents or thinners. Take off all contaminated clothing immediately. Wash skin thoroughly with soap and water or use recognized skin cleanser. If skin irritation persists, call a physician.

Inhalation
Avoid inhalation of vapour or mist. Move to fresh air in case of accidental inhalation of vapours. If breathing is irregular or stopped, administer artificial respiration. If unconscious place in recovery position and seek medical advice. If symptoms persist, call a physician.

Ingestion
If swallowed, seek medical advice immediately and show this container or label. Do NOT induce vomiting. Keep at rest.

Most Important Symptoms/effects, acute and delayed

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Inhalation
Ingestion
May result in gastrointestinal distress.

Skin or eye contact
May cause irritation or burning of the eyes. Repeated or prolonged liquid contact may cause skin irritation with discomfort and dermatitis.

Indication of immediate medical attention and special treatment needed if necessary
No data available on the product. See section 3 and 11 for hazardous ingredients found in the product.

5. Firefighting measures

Suitable extinguishing media
Extinguishing media which shall not be used for safety reasons
High volume water jet

Hazardous combustion products
CO, CO2, smoke, and oxides of any heavy metals that are reported in "Composition, Information on Ingredients" section.

Fire and Explosion Hazards
Combustible liquid. When heated above the flashpoint, emits vapors which, when mixed with air, will burn if an ignition source is present. Fine mist or sprays could ignite at temperatures below the flashpoint.

Special Protective Equipment and Fire Fighting Procedures
Full protective flameproof clothing should be worn as appropriate. Wear self contained breathing apparatus for fire fighting if necessary. In the event of fire, cool tanks with water spray. Do not allow run-off from fire fighting to enter public sewer systems or public waterways.

6. Accidental release measures

Procedures for cleaning up spills or leaks
Ventilate area. If heated above the flashpoint, remove sources of ignition. Prevent skin and eye contact and breathing of vapor. Wear a properly fitted air-purifying respirator with organic vapor cartridges (NIOSH approved TC-23C), eye protection, gloves and protective clothing. Confine, remove with inert absorbent, and dispose of properly.

Environmental precautions
Do not let product enter drains. Notify the respective authorities in accordance with local law in the case of contamination of rivers, lakes or waste water systems.

7. Handling and storage

Precautions for safe handling
Observe label precautions. Keep away from heat, flame and other sources of ignition. When heated above its flash point, this must be handled as if it were a flammable liquid. Close container after each use. Do not transfer contents to bottles or unlabeled containers. Wash thoroughly after handling and before eating or smoking.
If material is a coating: do not sand, flame cut, braze or weld dry coating without a NIOSH approved air purifying respirator with particulate filters or appropriate ventilation, and gloves. Combustible dust clouds may be created where operations produce fine material (dust). Avoid formation of significant deposits of material as they may become airborne and form combustible dust clouds. Build up of fine material should be cleaned using gentle sweeping or vacuuming in accordance with best practices. Cleaning methods (e.g. compressed air) which can generate potentially combustible dust clouds should not be used.

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Advice on protection against fire and explosion
Solvent vapours are heavier than air and may spread along floors. Vapors may form explosive mixtures with air and will burn when an ignition source is present. Always keep in containers of same material as the original one. Never use pressure to empty container: container is not a pressure vessel. The accumulation of contaminated rags may result in spontaneous combustion. Good housekeeping standards and regular safe removal of waste materials will minimize the risks of spontaneous combustion and other fire hazards.

Storage
Requirements for storage areas and containers
Observe label precautions. Store in a dry, well ventilated place away from sources of heat, ignition and direct sunlight. No smoking. Prevent unauthorized access. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Advice on common storage
Store separately from oxidizing agents and strongly alkaline and strongly acidic materials.

OSHA/NFPA Storage Classification: II

8. Exposure controls/personal protection

Engineering controls and work practices
Provide adequate ventilation. This should be achieved by a good general extraction and -if practically feasible- by the use of a local exhaust ventilation. If these are not sufficient to maintain concentrations of particulates and solvent vapour below the OEL, suitable respiratory protection must be worn.

National occupational exposure limits

CAS-No.	Chemical Name	Source	Time	Type	Value	Note
13463-67-7	Titanium dioxide	OSHA	8 hr	TWA	15 mg/m3	Total Dust
		Dupont	8 & 12 hour	TWA	10 mg/m3	Total Dust
			8 & 12 hour	TWA	5 mg/m3	Respirable Dust
67-64-1	Acetone	ACGIH	15 min	STEL	750 ppm	
			8 hr	TWA	500 ppm	
		OSHA	8 hr	TWA	1,000 ppm	
		Dupont	8 & 12 hour	TWA	500 ppm	
123-86-4	Butyl acetate	ACGIH	15 min	STEL	200 ppm	
			8 hr	TWA	150 ppm	
		OSHA	8 hr	TWA	150 ppm	
110-43-0	Methyl amyl ketone	ACGIH	8 hr	TWA	50 ppm	
		OSHA	8 hr	TWA	100 ppm	
21645-51-2	Aluminum hydroxide	ACGIH	8 hr	TWA	1 mg/m3	
7631-86-9	Amorphous silica	ACGIH	8 hr	TWA	3 mg/m3	Respirable Dust
		OSHA	8 hr	TWA	20 mppcf	

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CAS-No.	Chemical Name	Source	Time	Type	Value	Note
		Dupont	8 hr	PEL	3 mg/m3	
			8 hr	TWA	6 mg/m3	
141-78-6	Ethyl acetate	ACGIH	8 hr	TWA	400 ppm	
		OSHA	8 hr	TWA	400 ppm	
78-93-3	Methyl ethyl ketone	ACGIH	15 min	STEL	300 ppm	
			8 hr	TWA	200 ppm	
		OSHA	8 hr	TWA	200 ppm	
		Dupont	15 min	TWA	300 ppm	
			8 & 12 hour	TWA	200 ppm	

** TWA = Time-weighted average.
STEL = Short term exposure limit.
PEL = Permissible Exposure Limit.

Protective equipment
Personal protective equipment should be worn to prevent contact with eyes, skin or clothing.

Respiratory protection
Do not breathe vapors or mists. Wear an appropriate, properly fitted NIOSH approved respirator during application and until all vapors and spray mists are exhausted unless air monitoring demonstrates vapor/mist levels are below applicable limits. If respirators are required, use a properly fitted air-purifying respirator with organic vapor cartridges (NIOSH approved TC-23C) and particulate filter (NIOSH TC-84A). In confined spaces, or in situations where continuous spray operations are typical, or if proper air-purifying respirator fit is not possible, wear a positive pressure, supplied-air respirator (NIOSH TC-19C). In all cases, follow respirator manufacturer's directions for respirator use.'

Eye protection
Desirable in all industrial situations. Goggles are preferred to prevent eye irritation. If safety glasses are substituted, include splash guard or side shields.

Skin and body protection
Neoprene gloves and coveralls are recommended.

Hygiene measures
Wash skin thoroughly with soap and water or use recognized skin cleanser. Do NOT use solvents or thinners.

Environmental exposure controls
Do not let product enter drains. For ecological information, refer to Ecological Information Section 12.

9. Physical and chemical properties

Appearance

Form: liquid Colour:

Flash point	104 °F

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MMFDX-02469

Ignition temperature	377 °C	
Lower Explosive Limit	1.1 %	
Upper Explosive Limit	10.3 %	
Evapouration rate	Slower than Ether	
Vapor pressure of principal solvent	18.7 hPa	
Water solubility	moderate	
Vapor density of principal solvent (Air = 1)	4	
Approx. Boiling Range	152 °C	
Approx. Freezing Range	Not applicable.	
Gallon Weight (lbs/gal)	11.49	
Specific Gravity	1.38	
Percent Volatile By Volume	54.80%	
Percent Volatile By Weight	33.91%	
Percent Solids By Volume	45.20%	
Percent Solids By Weight	66.09%	
pH (waterborne systems only)	Not applicable.	
Partition coefficient: n-octanol/water	no data available	
Ignition temperature	377 °C	DIN 51794
Decomposition temperature		
Viscosity (23 °C)	Not applicable.	ISO 2431-1993
VOC* less exempt (lbs/gal)	3.7	
VOC* as packaged (lbs/gal)	3.4	
VOC LE (TBAC)	3.7	
VOC AP (TBAC)	3.4	

* VOC less exempt (theoretical) and VOC as packaged (theoretical) are based upon the VOC of the packaged material at the point of manufacture.
TBAC is not universally recognized as an exempt solvent.
Users should consult the applicable regulations for their region.

10. Stability and reactivity

Stability
Stable

Conditions to avoid
Stable under recommended storage conditions.

Materials to avoid
None reasonably foreseeable.

Hazardous decomposition products
When exposed to high temperatures may produce hazardous decomposition products such as carbon monoxide and dioxide, smoke, oxides of nitrogen.

Hazardous Polymerization
Will not occur.

Sensitivity to Static Discharge
If heated above the flash point, solvent vapors in air may explode if static grounding and bonding is not used during transfer of this product.

Sensitivity to Mechanical Impact
None known.

11. Toxicological information

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Information on likely routes of exposure

Inhalation
Ingestion
May result in gastrointestinal distress.

Skin or eye contact
May cause irritation or burning of the eyes. Repeated or prolonged liquid contact may cause skin irritation with discomfort and dermatitis.

Delayed and immediate effects and also chronic effects from short and long term exposure:

Acute oral toxicity
not hazardous

Acute dermal toxicity
not hazardous

Acute inhalation toxicity
not hazardous

% of unknown composition 7.9 %

Skin corrosion/irritation
Not classified according to GHS criteria

Serious eye damage/eye irritation
Not classified according to GHS criteria

Respiratory sensitisation
Not classified according to GHS criteria

Skin sensitisation
Not classified according to GHS criteria

Germ cell mutagenicity
Not classified according to GHS criteria

Carcinogenicity
Not classified according to GHS criteria

Toxicity for reproduction
Not classified according to GHS criteria

Target Organ Systemic Toxicant - Single exposure
Not classified according to GHS criteria

Target Organ Systemic Toxicant - Repeated exposure
Not classified according to GHS criteria

Aspiration toxicity
Not classified according to GHS criteria

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MMTRX-02469

Numerical measures of toxicity (acute toxicity estimation (ATE),etc.)
No information available.

Symptoms related to the physical, chemical and toxicological characteristics
Exposure to component solvents vapours concentration in excess of the stated occupational exposure limit may result in adverse health effect such as mucous membrane and respiratory system irritation and adverse effect on kidney, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness. Through skin resorbtion, solvents can cause some of the effects described here. Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin resulting in non-allergic contact dermatitis and absorption through the skin. The liquid splashed in the eyes may cause irritation and reversible damage.

Whether the hazardous chemical is listed by NTP, IARC or OSHA

Titanium dioxide	IARC 2B

12. Ecological information

There are no data available on the product itself. The product should not be allowed to enter drains or watercourses.

13. Disposal considerations

Waste Disposal Method
Do not allow material to contaminate ground water systems. Incinerate or otherwise dispose of waste material in accordance with Federal, State, Provincial, and local requirements. Do not incinerate in closed containers.

14. Transport information

International transport regulations

IMDG (Sea transport)	
UN number:	1263
Proper shipping name:	PAINT
Hazard Class:	3
Subsidiary Hazard Class:	Not applicable.
Packing group:	III
Marine Pollutant:	no
ICAO/IATA (Air transport)	
UN number:	1263
Proper shipping name:	PAINT
Hazard Class:	3
Subsidiary Hazard Class:	Not applicable.
Packing group:	III
DOT	
UN number:	1263
Proper shipping name:	PAINT
Hazard Class:	3
Subsidiary Hazard Class:	Not applicable.
Packing group:	III
Marine Pollutant:	no
EmS:	F-E,S-E

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Matters needing attention for transportation
Confirm that there is no breakage, corrosion, or leakage from the container before shipping. Be sure to prevent damage to cargo by loading so as to avoid falling, dropping, or collapse. Ship in appropriate containers with denotation of the content in accordance with the relevant statutes and rules.

15. Regulatory information

TSCA Status
In compliance with TSCA Inventory requirements for commercial purposes.

DSL Status
Product is not DSL listed because one or more ingredients are not on the DSL inventory.

Photochemical Reactivity
Non-photochemically reactive

Regulatory information

		EPCRA					CERCLA	CAA
CAS #	Ingredient	302	TPQ	RQ	311 - 312	313	RQ(lbs)	HAP
13463-67-7	Titanium dioxide	N	NR	NR	,A,C,F,N,R	N	NR	N
No information available.	Acrylic polymer	N	NR	NR	NA	N	NR	N
69153-52-2	Polyester resin	N	NR	NR	NA	N	NR	N
67-64-1	Acetone	N	NR	NR	A,C,F	N	5,000	N
123-86-4	Butyl acetate	N	NR	NR	A,C,F	N	NR	N
110-43-0	Methyl amyl ketone	N	NR	NR	A,C,F	N	NR	N
No information available.	Acrylic resin	N	NR	NR	NA	N	NR	N
21645-51-2	Aluminum hydroxide	N	NR	NR	,A,C,F,N,R	N	NR	N
7631-86-9	Amorphous silica	N	NR	NR	,A,C,F,N,R	N	NR	N
763-69-9	Ethyl 3-ethoxy propionate	N	NR	NR	NA	N	NR	N
141-78-6	Ethyl acetate	N	NR	NR	C,F	N	NR	N
78-93-3	Methyl ethyl ketone	N	NR	NR	A,C,F	N	5,000	N

Key:

EPCRA	Emergency Planning and Community Right-to-know Act (aka Title III, SARA)
302	Extremely hazardous substances
311/312 Categories	F = Fire Hazard R = Reactivity Hazard P = Pressure Related Hazard A = Acute Hazard C = Chronic Hazard
313 Information	Section 313 Supplier Notification - The chemicals listed above with a 'Y' in the 313 column are subject to reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know act of 1986 and of 40 CFR 372.
CERCLA	Comprehensive Emergency Response, Compensation and Liability Act of 1980.
HAP	Listed as a Clean Air Act Hazardous Air Pollutant.
TPQ	Threshold Planning Quantity.
RQ	Reportable Quantity
NA	not available
NR	not regulated

16. Other information

HMIS rating H: 2 F: 2 R: 0

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MMRX-02469

Glossary of Terms:

ACGIH	American Conference of Governmental Industrial Hygienists.
IARC	International Agency for Research on Cancer.
NTP	National Toxicology Program.
OEL	Occupational Exposure Limit
OSHA	Occupational Safety and Health Administration.
STEL	Short term exposure limit.
TWA	Time-weighted average.
PNOR	Particles not otherwise regulated.
PNOC	Particles not otherwise classified.

NOTE: The list (above) of glossary terms may be modified.

Notice from Axalta Coating Systems
The document reflects information provided to Axalta Coating Systems by its suppliers. Information is accurate to the best of our knowledge and is subject to change as new data is received by Axalta Coating Systems. Persons receiving this information should make their own determination as to its suitability for their purposes prior to use. The information on this Material Safety Data Sheet relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process.
SDS prepared by:
Axalta Coating Systems Regulatory Affairs
Report version

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MMRX-002469

1. Identification of the substance/mixture and of the company/undertaking

Product name	COLOR ATLAS YELLOW	
Product code	CAS200	
Intended use	Coating for professional use	
	Axalta Coating Systems, LLC Applied Corporate Center 50 Applied Card Way, Suite 300 US Glen Mills, PA 19342	
Telephone	Product information Medical emergency Transportation emergency	(855) 6-AXALTA (855) 274-5698 (800) 424-9300 (CHEMTREC)

2. Hazards identification

This preparation is hazardous per the following GHS criteria

GHS-Classification

Flammable liquids	Category 3
Serious eye damage/eye irritation	Category 2A

Endpoints which are ""not classified"", ""cannot classified"" and ""not applicable"" are not shown

GHS-Labelling

Hazard symbols	
Signal word	Warning
Hazard statements	Flammable liquid and vapour. Causes serious eye irritation.
Precautionary statements	Wear eye protection/ face protection. Ground/bond container and receiving equipment. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Keep container tightly closed. Take precautionary measures against static discharge. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Wear protective gloves/ eye protection/ face protection. If eye irritation persists: Get medical advice/ attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower. Store in a well-ventilated place. Keep cool. Dispose of contents/container in accordance with local regulations.

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Other hazards which do not result in classification
None known.

The following percentage of the mixture consists of ingredient(s) with unknown acute toxicity:
17.9 %

3. Composition/information on ingredients

Mixture of synthetic resins, pigments, and solvents

Components

CAS-No.	Chemical Name	Concentration	GHS Hazardous
No information available.	Acrylic polymer	20 - 30%	
51274-00-1	Light yellow lemon yellow oxide pigment	5 - 10%	
69153-52-2	Polyester resin	5 - 10%	
67-64-1	Acetone	4 - 15%	√
123-86-4	Butyl acetate	4 - 15%	√
1309-37-1	Iron oxide	4 - 15%	√
110-43-0	Methyl amyl ketone	4 - 15%	√
No information available.	Acrylic resin	1 - 5%	
763-69-9	Ethyl 3-ethoxy propionate	1 - 4%	√
141-78-6	Ethyl acetate	1 - 4%	√
67-63-0	Isopropyl alcohol	1 - 4%	√
78-93-3	Methyl ethyl ketone	1 - 4%	√
1333-86-4	Carbon black	0.5%	

OSHA Hazardous: Yes
* Assigned CAS No. - An official CAS No. does not exist. The CAS No. shown is for a similar chemical.

4. First aid measures

Eye contact
Remove contact lenses. Irrigate copiously with clean, fresh water for at least 15 minutes, holding the eyelids apart. Seek medical advice.

Skin contact
Do NOT use solvents or thinners. Take off all contaminated clothing immediately. Wash skin thoroughly with soap and water or use recognized skin cleanser. If skin irritation persists, call a physician.

Inhalation
Avoid inhalation of vapour or mist. Move to fresh air in case of accidental inhalation of vapours. If breathing is irregular or stopped, administer artificial respiration. If unconscious place in recovery position and seek medical advice. If symptoms persist, call a physician.

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MMRX-02458

Ingestion
If swallowed, seek medical advice immediately and show this container or label. Do NOT induce vomiting. Keep at rest.

Most Important Symptoms/effects, acute and delayed

Inhalation
Ingestion
May result in gastrointestinal distress.

Skin or eye contact
May cause irritation or burning of the eyes. Repeated or prolonged liquid contact may cause skin irritation with discomfort and dermatitis.

Indication of Immediate medical attention and special treatment needed if necessary
No data available on the product. See section 3 and 11 for hazardous ingredients found in the product.

5. Firefighting measures

Suitable extinguishing media
Extinguishing media which shall not be used for safety reasons
High volume water jet

Hazardous combustion products
CO, CO2, smoke, and oxides of any heavy metals that are reported in "Composition, Information on Ingredients" section.

Fire and Explosion Hazards
Combustible liquid. When heated above the flashpoint, emits vapors which, when mixed with air, will burn if an ignition source is present. Fine mist or sprays could ignite at temperatures below the flashpoint.

Special Protective Equipment and Fire Fighting Procedures
Full protective flameproof clothing should be worn as appropriate. Wear self contained breathing apparatus for fire fighting if necessary. In the event of fire, cool tanks with water spray. Do not allow run-off from fire fighting to enter public sewer systems or public waterways.

6. Accidental release measures

Procedures for cleaning up spills or leaks
Ventilate area. If heated above the flashpoint, remove sources of ignition. Prevent skin and eye contact and breathing of vapor. Wear a properly fitted air-purifying respirator with organic vapor cartridges (NIOSH approved TC-23C), eye protection, gloves and protective clothing. Confine, remove with inert absorbent, and dispose of properly.

Environmental precautions
Do not let product enter drains. Notify the respective authorities in accordance with local law in the case of contamination of rivers, lakes or waste water systems.

7. Handling and storage

Precautions for safe handling
Observe label precautions. Keep away from heat, flame and other sources of ignition. When heated above its flash point, this must be handled as if it were a flammable liquid. Close container after each use. Do not transfer contents to bottles or unlabeled containers. Wash thoroughly after handling and before eating or smoking.
If material is a coating: do not sand, flame cut, braze or weld dry coating without a NIOSH approved air purifying respirator with particulate filters or appropriate ventilation, and gloves. Combustible dust clouds may be created where operations produce fine material (dust). Avoid formation of significant deposits of material as they may become airborne and form combustible dust clouds. Build up of fine material should be cleaned using gentle sweeping or vacuuming in accordance with best practices. Cleaning methods (e.g. compressed air) which can generate potentially combustible dust clouds should not be used.

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MMFIX-022458

Advice on protection against fire and explosion
Solvent vapours are heavier than air and may spread along floors. Vapors may form explosive mixtures with air and will burn when an ignition source is present. Always keep in containers of same material as the original one. Never use pressure to empty container: container is not a pressure vessel. The accumulation of contaminated rags may result in spontaneous combustion. Good housekeeping standards and regular safe removal of waste materials will minimize the risks of spontaneous combustion and other fire hazards.

Storage
Requirements for storage areas and containers
Observe label precautions. Store in a dry, well ventilated place away from sources of heat, ignition and direct sunlight. No smoking. Prevent unauthorized access. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Advice on common storage
Store separately from oxidizing agents and strongly alkaline and strongly acidic materials.

OSHA/NFPA Storage Classification: II

8. Exposure controls/personal protection

Engineering controls and work practices
Provide adequate ventilation. This should be achieved by a good general extraction and -if practically feasible- by the use of a local exhaust ventilation. If these are not sufficient to maintain concentrations of particulates and solvent vapour below the OEL, suitable respiratory protection must be worn.

National occupational exposure limits

CAS-No.	Chemical Name	Source	Time	Type	Value	Note
67-64-1	Acetone	ACGIH	15 min	STEL	750 ppm	
			8 hr	TWA	500 ppm	
		OSHA	8 hr	TWA	1,000 ppm	
		Dupont	8 & 12 hour	TWA	500 ppm	
123-86-4	Butyl acetate	ACGIH	15 min	STEL	200 ppm	
			8 hr	TWA	150 ppm	
		OSHA	8 hr	TWA	150 ppm	
1309-37-1	Iron oxide	ACGIH	8 hr	TWA	5 mg/m3	Respirable Dust
		OSHA	8 hr	TWA	10 mg/m3	
		Dupont	8 hr	TWA	3 mg/m3	
110-43-0	Methyl amyl ketone	ACGIH	8 hr	TWA	50 ppm	
		OSHA	8 hr	TWA	100 ppm	
141-78-6	Ethyl acetate	ACGIH	8 hr	TWA	400 ppm	
		OSHA	8 hr	TWA	400 ppm	
78-93-3	Methyl ethyl ketone	ACGIH	15 min	STEL	300 ppm	
			8 hr	TWA	200 ppm	

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CAS-No.	Chemical Name	Source	Time	Type	Value	Note
		OSHA	8 hr	TWA	200 ppm	
		Dupont	15 min	TWA	300 ppm	
			8 & 12 hour	TWA	200 ppm	
1333-86-4	Carbon black	ACGIH	8 hr	TWA	3 mg/m3	
		OSHA	8 hr	TWA	3.5 mg/m3	
		Dupont	8 & 12 hour	TWA	0.5 mg/m3	

** STEL = Short term exposure limit.
TWA = Time-weighted average.

Protective equipment
Personal protective equipment should be worn to prevent contact with eyes, skin or clothing.

Respiratory protection
Do not breathe vapors or mists. Wear an appropriate, properly fitted NIOSH approved respirator during application and until all vapors and spray mists are exhausted unless air monitoring demonstrates vapor/mist levels are below applicable limits. If respirators are required, use a properly fitted air-purifying respirator with organic vapor cartridges (NIOSH approved TC-23C) and particulate filter (NIOSH TC-84A). In confined spaces, or in situations where continuous spray operations are typical, or if proper air-purifying respirator fit is not possible, wear a positive pressure, supplied-air respirator (NIOSH TC-19C). In all cases, follow respirator manufacturer's directions for respirator use.'

Eye protection
Desirable in all industrial situations. Goggles are preferred to prevent eye irritation. If safety glasses are substituted, include splash guard or side shields.

Skin and body protection
Neoprene gloves and coveralls are recommended.

Hygiene measures
Wash skin thoroughly with soap and water or use recognized skin cleanser. Do NOT use solvents or thinners.

Environmental exposure controls
Do not let product enter drains. For ecological information, refer to Ecological Information Section 12.

9. Physical and chemical properties

Appearance

Form: liquid Colour:

Flash point	104 °F
Ignition temperature	377 °C
Lower Explosive Limit	1.1 %
Upper Explosive Limit	10.3 %
Evapouration rate	Slower than Ether
Vapor pressure of principal solvent	21.2 hPa

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MMRX-022458

Water solubility	moderate	
Vapor density of principal solvent (Air = 1)	3.9	
Approx. Boiling Range	152 °C	
Approx. Freezing Range	Not applicable.	
Gallon Weight (lbs/gal)	8.97	
Specific Gravity	1.08	
Percent Volatile By Volume	54.82%	
Percent Volatile By Weight	42.98%	
Percent Solids By Volume	45.18%	
Percent Solids By Weight	57.02%	
pH (waterborne systems only)	Not applicable.	
Partition coefficient: n-octanol/water	no data available	
Ignition temperature	377 °C	DIN 51794
Decomposition temperature		
Viscosity (23 °C)	Not applicable.	ISO 2431-1993
VOC* less exempt (lbs/gal)	3.7	
VOC* as packaged (lbs/gal)	3.4	

* VOC less exempt (theoretical) and VOC as packaged (theoretical) are based upon the VOC of the packaged material at the point of manufacture.

10. Stability and reactivity

Stability
Stable

Conditions to avoid
Stable under recommended storage conditions.

Materials to avoid
None reasonably foreseeable.

Hazardous decomposition products
When exposed to high temperatures may produce hazardous decomposition products such as carbon monoxide and dioxide, smoke, oxides of nitrogen.

Hazardous Polymerization
Will not occur.

Sensitivity to Static Discharge
If heated above the flash point, solvent vapors in air may explode if static grounding and bonding is not used during transfer of this product.

Sensitivity to Mechanical Impact
None known.

11. Toxicological information

Information on likely routes of exposure

Inhalation
Ingestion
May result in gastrointestinal distress.

Skin or eye contact
May cause irritation or burning of the eyes. Repeated or prolonged liquid contact may cause skin irritation with discomfort and dermatitis.

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Delayed and immediate effects and also chronic effects from short and long term exposure:

Acute oral toxicity
not hazardous

Acute dermal toxicity
not hazardous

Acute inhalation toxicity
not hazardous

% of unknown composition 17.9 %

Skin corrosion/irritation
Not classified according to GHS criteria

Serious eye damage/eye irritation

acetone	Category 2A
Iron oxide	Category 1
heptan-2-one	Category 2B
ethyl acetate	Category 2A
propan-2-ol	Category 2A
butanone	Category 2A

Respiratory sensitisation
Not classified according to GHS criteria

Skin sensitisation
Not classified according to GHS criteria

Germ cell mutagenicity
Not classified according to GHS criteria

Carcinogenicity
Not classified according to GHS criteria

Toxicity for reproduction
Not classified according to GHS criteria

Target Organ Systemic Toxicant - Single exposure
Not classified according to GHS criteria

Target Organ Systemic Toxicant - Repeated exposure
Not classified according to GHS criteria

Aspiration toxicity
Not classified according to GHS criteria

Numerical measures of toxicity (acute toxicity estimation (ATE),etc.)
No information available.

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Symptoms related to the physical, chemical and toxicological characteristics
Exposure to component solvents vapours concentration in excess of the stated occupational exposure limit may result in adverse health effect such as mucous membrane and respiratory system irritation and adverse effect on kidney, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness. Through skin resorbtion, solvents can cause some of the effects described here. Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin resulting in non-allergic contact dermatitis and absorption through the skin. The liquid splashed in the eyes may cause irritation and reversible damage.

Whether the hazardous chemical is listed by NTP, IARC or OSHA

carbon black IARC 2B

12. Ecological information

There are no data available on the product itself. The product should not be allowed to enter drains or watercourses.

13. Disposal considerations

Waste Disposal Method
Do not allow material to contaminate ground water systems. Incinerate or otherwise dispose of waste material in accordance with Federal, State, Provincial, and local requirements. Do not incinerate in closed containers.

14. Transport information

International transport regulations

IMDG (Sea transport)	
UN number:	1263
Proper shipping name:	PAINT
Hazard Class:	3
Subsidiary Hazard Class:	Not applicable.
Packing group:	III
Marine Pollutant:	no
ICAO/IATA (Air transport)	
UN number:	1263
Proper shipping name:	PAINT
Hazard Class:	3
Subsidiary Hazard Class:	Not applicable.
Packing group:	III
DOT	
UN number:	1263
Proper shipping name:	PAINT
Hazard Class:	3
Subsidiary Hazard Class:	Not applicable.
Packing group:	III
Marine Pollutant:	no
EmS:	F-E,S-E

Matters needing attention for transportation
Confirm that there is no breakage, corrosion, or leakage from the container before shipping. Be sure to prevent damage to cargo by loading so as to avoid falling, dropping, or collapse. Ship in appropriate containers with denotation of the content in accordance with the relevant statutes and rules.

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15. Regulatory information

TSCA Status
In compliance with TSCA Inventory requirements for commercial purposes.

DSL Status
Product is not DSL listed because one or more ingredients are not on the DSL inventory.

Photochemical Reactivity
Non-photochemically reactive

US. California Safe Drinking Water & Toxic Enforcement Act (Proposition 65)
WARNING! This product contains a chemical known to the State of California to cause cancer.

Regulatory information

		EPCRA					CERCLA	CAA
CAS #	Ingredient	302	TPQ	RQ	311 - 312	313	RQ(lbs)	HAP
No information available.	Acrylic polymer	N	NR	NR	NA	N	NR	N
51274-00-1	Light yellow lemon yellow oxide pigment	N	NR	NR	,A,C,F,N,R	N	NR	N
69153-52-2	Polyester resin	N	NR	NR	NA	N	NR	N
67-64-1	Acetone	N	NR	NR	A,C,F	N	5,000	N
123-86-4	Butyl acetate	N	NR	NR	A,C,F	N	NR	N
1309-37-1	Iron oxide	N	NR	NR	N	N	NR	N
110-43-0	Methyl amyl ketone	N	NR	NR	A,C,F	N	NR	N
No information available.	Acrylic resin	N	NR	NR	NA	N	NR	N
763-69-9	Ethyl 3-ethoxy propionate	N	NR	NR	NA	N	NR	N
141-78-6	Ethyl acetate	N	NR	NR	C,F	N	NR	N
67-63-0	Isopropyl alcohol	N	NR	NR	,A,C,F,N,R	N	NR	N
78-93-3	Methyl ethyl ketone	N	NR	NR	A,C,F	N	5,000	N
1333-86-4	Carbon black	N	NR	NR	,A,C,F,N,R	N	NR	N

Key:

EPCRA	Emergency Planning and Community Right-to-know Act (aka Title III, SARA)
302	Extremely hazardous substances
311/312 Categories	F = Fire Hazard R = Reactivity Hazard P = Pressure Related Hazard A = Acute Hazard C = Chronic Hazard
313 Information	Section 313 Supplier Notification - The chemicals listed above with a 'Y' in the 313 column are subject to reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know act of 1986 and of 40 CFR 372.
CERCLA	Comprehensive Emergency Response, Compensation and Liability Act of 1980.
HAP	Listed as a Clean Air Act Hazardous Air Pollutant.
TPQ	Threshold Planning Quantity.
RQ	Reportable Quantity
NA	not available
NR	not regulated

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16. Other information

HMIS rating H: 2 F: 2 R: 0

Glossary of Terms:

ACGIH	American Conference of Governmental Industrial Hygienists.
IARC	International Agency for Research on Cancer.
NTP	National Toxicology Program.
OEL	Occupational Exposure Limit
OSHA	Occupational Safety and Health Administration.
STEL	Short term exposure limit.
TWA	Time-weighted average.
PNOR	Particles not otherwise regulated.
PNOC	Particles not otherwise classified.

NOTE: The list (above) of glossary terms may be modified.

Notice from Axalta Coating Systems
The document reflects information provided to Axalta Coating Systems by its suppliers. Information is accurate to the best of our knowledge and is subject to change as new data is received by Axalta Coating Systems. Persons receiving this information should make their own determination as to its suitability for their purposes prior to use. The information on this Material Safety Data Sheet relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process.
SDS prepared by:
Axalta Coating Systems Regulatory Affairs
Report version

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1. Identification of the substance/mixture and of the company/undertaking

Product name	COLOR ATLAS YELLOW	
Product code	CAS250	
Intended use	Coating for professional use	
	Axalta Coating Systems, LLC Applied Corporate Center 50 Applied Card Way, Suite 300 US Glen Mills, PA 19342	
Telephone	Product information	(855) 6-AXALTA
	Medical emergency	(855) 274-5698
	Transportation emergency	(800) 424-9300 (CHEMTREC)

2. Hazards identification

This preparation is hazardous per the following GHS criteria

GHS-Classification

Flammable liquids	Category 3
Serious eye damage/eye irritation	Category 2A

Endpoints which are ""not classified"", ""cannot classified"" and ""not applicable"" are not shown

GHS-Labelling

Hazard symbols	
Signal word	Warning
Hazard statements	Flammable liquid and vapour. Causes serious eye irritation.
Precautionary statements	Wear eye protection/ face protection. Ground/bond container and receiving equipment. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Keep container tightly closed. Take precautionary measures against static discharge. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Wear protective gloves/ eye protection/ face protection. If eye irritation persists: Get medical advice/ attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower. Store in a well-ventilated place. Keep cool. Dispose of contents/container in accordance with local regulations.

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Other hazards which do not result in classification
None known.

The following percentage of the mixture consists of ingredient(s) with unknown acute toxicity:
11.8 %

3. Composition/information on ingredients

Mixture of synthetic resins, pigments, and solvents

Components

CAS-No.	Chemical Name	Concentration	GHS Hazardous
No information available.	Acrylic polymer	20 - 30%	
68134-22-5	C.i. pigment yellow 154	10 - 20%	
69153-52-2	Polyester resin	5 - 10%	
67-64-1	Acetone	4 - 15%	√
123-86-4	Butyl acetate	4 - 15%	√
110-43-0	Methyl amyl ketone	4 - 15%	√
13463-67-7	Titanium dioxide	2.1%	
763-69-9	Ethyl 3-ethoxy propionate	1 - 4%	√
141-78-6	Ethyl acetate	1 - 4%	√
78-93-3	Methyl ethyl ketone	1 - 4%	√
100-41-4	Ethylbenzene	0.1%	√

OSHA Hazardous: Yes
* Assigned CAS No. - An official CAS No. does not exist. The CAS No. shown is for a similar chemical.

4. First aid measures

Eye contact
Remove contact lenses. Irrigate copiously with clean, fresh water for at least 15 minutes, holding the eyelids apart. Seek medical advice.

Skin contact
Do NOT use solvents or thinners. Take off all contaminated clothing immediately. Wash skin thoroughly with soap and water or use recognized skin cleanser. If skin irritation persists, call a physician.

Inhalation
Avoid inhalation of vapour or mist. Move to fresh air in case of accidental inhalation of vapours. If breathing is irregular or stopped, administer artificial respiration. If unconscious place in recovery position and seek medical advice. If symptoms persist, call a physician.

Ingestion
If swallowed, seek medical advice immediately and show this container or label. Do NOT induce vomiting. Keep at rest.

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Most Important Symptoms/effects, acute and delayed

Inhalation
Ingestion
May result in gastrointestinal distress.

Skin or eye contact
May cause irritation or burning of the eyes. Repeated or prolonged liquid contact may cause skin irritation with discomfort and dermatitis.

Indication of immediate medical attention and special treatment needed if necessary
No data available on the product. See section 3 and 11 for hazardous ingredients found in the product.

5. Firefighting measures

Suitable extinguishing media
Extinguishing media which shall not be used for safety reasons
High volume water jet

Hazardous combustion products
CO, CO2, smoke, and oxides of any heavy metals that are reported in "Composition, Information on Ingredients" section.

Fire and Explosion Hazards
Combustible liquid. When heated above the flashpoint, emits vapors which, when mixed with air, will burn if an ignition source is present. Fine mist or sprays could ignite at temperatures below the flashpoint.

Special Protective Equipment and Fire Fighting Procedures
Full protective flameproof clothing should be worn as appropriate. Wear self contained breathing apparatus for fire fighting if necessary. In the event of fire, cool tanks with water spray. Do not allow run-off from fire fighting to enter public sewer systems or public waterways.

6. Accidental release measures

Procedures for cleaning up spills or leaks
Ventilate area. If heated above the flashpoint, remove sources of ignition. Prevent skin and eye contact and breathing of vapor. Wear a properly fitted air-purifying respirator with organic vapor cartridges (NIOSH approved TC-23C), eye protection, gloves and protective clothing. Confine, remove with inert absorbent, and dispose of properly.

Environmental precautions
Do not let product enter drains. Notify the respective authorities in accordance with local law in the case of contamination of rivers, lakes or waste water systems.

7. Handling and storage

Precautions for safe handling
Observe label precautions. Keep away from heat, flame and other sources of ignition. When heated above its flash point, this must be handled as if it were a flammable liquid. Close container after each use. Do not transfer contents to bottles or unlabeled containers. Wash thoroughly after handling and before eating or smoking.
If material is a coating: do not sand, flame cut, braze or weld dry coating without a NIOSH approved air purifying respirator with particulate filters or appropriate ventilation, and gloves. Combustible dust clouds may be created where operations produce fine material (dust). Avoid formation of significant deposits of material as they may become airborne and form combustible dust clouds. Build up of fine material should be cleaned using gentle sweeping or vacuuming in accordance with best practices. Cleaning methods (e.g. compressed air) which can generate potentially combustible dust clouds should not be used.

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NMRX-024460

Advice on protection against fire and explosion
Solvent vapours are heavier than air and may spread along floors. Vapors may form explosive mixtures with air and will burn when an ignition source is present. Always keep in containers of same material as the original one. Never use pressure to empty container: container is not a pressure vessel. The accumulation of contaminated rags may result in spontaneous combustion. Good housekeeping standards and regular safe removal of waste materials will minimize the risks of spontaneous combustion and other fire hazards.

Storage
Requirements for storage areas and containers
Observe label precautions. Store in a dry, well ventilated place away from sources of heat, ignition and direct sunlight. No smoking. Prevent unauthorized access. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Advice on common storage
Store separately from oxidizing agents and strongly alkaline and strongly acidic materials.

OSHA/NFPA Storage Classification: II

8. Exposure controls/personal protection

Engineering controls and work practices
Provide adequate ventilation. This should be achieved by a good general extraction and -if practically feasible- by the use of a local exhaust ventilation. If these are not sufficient to maintain concentrations of particulates and solvent vapour below the OEL, suitable respiratory protection must be worn.

National occupational exposure limits

CAS-No.	Chemical Name	Source	Time	Type	Value	Note
67-64-1	Acetone	ACGIH	15 min	STEL	750 ppm	
			8 hr	TWA	500 ppm	
		OSHA	8 hr	TWA	1,000 ppm	
		Dupont	8 & 12 hour	TWA	500 ppm	
123-86-4	Butyl acetate	ACGIH	15 min	STEL	200 ppm	
			8 hr	TWA	150 ppm	
		OSHA	8 hr	TWA	150 ppm	
110-43-0	Methyl amyl ketone	ACGIH	8 hr	TWA	50 ppm	
		OSHA	8 hr	TWA	100 ppm	
13463-67-7	Titanium dioxide	OSHA	8 hr	TWA	15 mg/m3	Total Dust
		Dupont	8 & 12 hour	TWA	10 mg/m3	Total Dust
			8 & 12 hour	TWA	5 mg/m3	Respirable Dust
141-78-6	Ethyl acetate	ACGIH	8 hr	TWA	400 ppm	
		OSHA	8 hr	TWA	400 ppm	
78-93-3	Methyl ethyl ketone	ACGIH	15 min	STEL	300 ppm	

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CAS-No.	Chemical Name	Source	Time	Type	Value	Note
			8 hr	TWA	200 ppm	
		OSHA	8 hr	TWA	200 ppm	
		Dupont	15 min	TWA	300 ppm	
			8 & 12 hour	TWA	200 ppm	
100-41-4	Ethylbenzene	ACGIH	8 hr	TWA	20 ppm	
		OSHA	8 hr	TWA	100 ppm	
		Dupont	8 & 12 hour	TWA	25 ppm	

** STEL = Short term exposure limit.
TWA = Time-weighted average.

Protective equipment
Personal protective equipment should be worn to prevent contact with eyes, skin or clothing.

Respiratory protection
Do not breathe vapors or mists. Wear an appropriate, properly fitted NIOSH approved respirator during application and until all vapors and spray mists are exhausted unless air monitoring demonstrates vapor/mist levels are below applicable limits. If respirators are required, use a properly fitted air-purifying respirator with organic vapor cartridges (NIOSH approved TC-23C) and particulate filter (NIOSH TC-84A). In confined spaces, or in situations where continuous spray operations are typical, or if proper air-purifying respirator fit is not possible, wear a positive pressure, supplied-air respirator (NIOSH TC-19C). In all cases, follow respirator manufacturer's directions for respirator use.'

Eye protection
Desirable in all industrial situations. Goggles are preferred to prevent eye irritation. If safety glasses are substituted, include splash guard or side shields.

Skin and body protection
Neoprene gloves and coveralls are recommended.

Hygiene measures
Wash skin thoroughly with soap and water or use recognized skin cleanser. Do NOT use solvents or thinners.

Environmental exposure controls
Do not let product enter drains. For ecological information, refer to Ecological Information Section 12.

9. Physical and chemical properties

Appearance

Form: liquid Colour:

Flash point	104 °F
Ignition temperature	290 °C
Lower Explosive Limit	1.1 %
Upper Explosive Limit	12.8 %
Evapouration rate	Slower than Ether

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MMRDX-032460

Vapor pressure of principal solvent	28.6 hPa	
Water solubility	appreciable	
Vapor density of principal solvent (Air = 1)	3.9	
Approx. Boiling Range	152 °C	
Approx. Freezing Range	Not applicable.	
Gallon Weight (lbs/gal)	8.55	
Specific Gravity	1.02	
Percent Volatile By Volume	55.99%	
Percent Volatile By Weight	46.10%	
Percent Solids By Volume	44.01%	
Percent Solids By Weight	53.90%	
pH (waterborne systems only)	Not applicable.	
Partition coefficient: n-octanol/water	no data available	
Ignition temperature	290 °C	DIN 51794
Decomposition temperature		
Viscosity (23 °C)	Not applicable.	ISO 2431-1993
VOC* less exempt (lbs/gal)	3.7	
VOC* as packaged (lbs/gal)	3.3	
VOC LE (TBAC)	3.6	
VOC AP (TBAC)	3.2	

* VOC less exempt (theoretical) and VOC as packaged (theoretical) are based upon the VOC of the packaged material at the point of manufacture.
TBAC is not universally recognized as an exempt solvent.
Users should consult the applicable regulations for their region.

10. Stability and reactivity

Stability
Stable

Conditions to avoid
Stable under recommended storage conditions.

Materials to avoid
None reasonably foreseeable.

Hazardous decomposition products
When exposed to high temperatures may produce hazardous decomposition products such as carbon monoxide and dioxide, smoke, oxides of nitrogen.

Hazardous Polymerization
Will not occur.

Sensitivity to Static Discharge
If heated above the flash point, solvent vapors in air may explode if static grounding and bonding is not used during transfer of this product.

Sensitivity to Mechanical Impact
None known.

11. Toxicological information

Information on likely routes of exposure

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Inhalation
Ingestion
May result in gastrointestinal distress.

Skin or eye contact
May cause irritation or burning of the eyes. Repeated or prolonged liquid contact may cause skin irritation with discomfort and dermatitis.

Delayed and immediate effects and also chronic effects from short and long term exposure:

Acute oral toxicity
not hazardous

Acute dermal toxicity
not hazardous

Acute inhalation toxicity
not hazardous

% of unknown composition 11.8 %

Skin corrosion/irritation
Not classified according to GHS criteria

Serious eye damage/eye irritation

acetone	Category 2A
heptan-2-one	Category 2B
ethyl acetate	Category 2A
butanone	Category 2A
ethylbenzene	Category 2B

Respiratory sensitisation
Not classified according to GHS criteria

Skin sensitisation
Not classified according to GHS criteria

Germ cell mutagenicity
Not classified according to GHS criteria

Carcinogenicity
Not classified according to GHS criteria

Toxicity for reproduction
Not classified according to GHS criteria

Target Organ Systemic Toxicant - Single exposure
Not classified according to GHS criteria

Target Organ Systemic Toxicant - Repeated exposure
Not classified according to GHS criteria

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Aspiration toxicity
Not classified according to GHS criteria

Numerical measures of toxicity (acute toxicity estimation (ATE),etc.)
No information available.

Symptoms related to the physical, chemical and toxicological characteristics
Exposure to component solvents vapours concentration in excess of the stated occupational exposure limit may result in adverse health effect such as mucous membrane and respiratory system irritation and adverse effect on kidney, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness. Through skin resorbtion, solvents can cause some of the effects described here. Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin resulting in non-allergic contact dermatitis and absorption through the skin. The liquid splashed in the eyes may cause irritation and reversible damage.

Whether the hazardous chemical is listed by NTP, IARC or OSHA

Titanium dioxide	IARC 2B
ethylbenzene	IARC 2B

12. Ecological information

There are no data available on the product itself. The product should not be allowed to enter drains or watercourses.

13. Disposal considerations

Waste Disposal Method
Do not allow material to contaminate ground water systems. Incinerate or otherwise dispose of waste material in accordance with Federal, State, Provincial, and local requirements. Do not incinerate in closed containers.

14. Transport information

International transport regulations

IMDG (Sea transport)	
UN number:	1263
Proper shipping name:	PAINT
Hazard Class:	3
Subsidiary Hazard Class:	Not applicable.
Packing group:	III
Marine Pollutant:	no
ICAO/IATA (Air transport)	
UN number:	1263
Proper shipping name:	PAINT
Hazard Class:	3
Subsidiary Hazard Class:	Not applicable.
Packing group:	III
DOT	
UN number:	1263
Proper shipping name:	PAINT
Hazard Class:	3
Subsidiary Hazard Class:	Not applicable.
Packing group:	III

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MMRX-02460

Marine Pollutant:	no
EmS:	F-E,S-E

Matters needing attention for transportation
Confirm that there is no breakage, corrosion, or leakage from the container before shipping. Be sure to prevent damage to cargo by loading so as to avoid falling, dropping, or collapse. Ship in appropriate containers with denotation of the content in accordance with the relevant statutes and rules.

15. Regulatory information

TSCA Status
In compliance with TSCA Inventory requirements for commercial purposes.

DSL Status
Product is not DSL listed because one or more ingredients are not on the DSL inventory.

Photochemical Reactivity
Non-photochemically reactive

US. California Safe Drinking Water & Toxic Enforcement Act (Proposition 65)
WARNING! This product contains a chemical known to the State of California to cause cancer.

Regulatory information

		EPCRA					CERCLA	CAA
CAS #	Ingredient	302	TPQ	RQ	311 - 312	313	RQ(lbs)	HAP
No information available.	Acrylic polymer	N	NR	NR	NA	N	NR	N
68134-22-5	C.i. pigment yellow 154	N	NR	NR	NA	N	NR	N
69153-52-2	Polyester resin	N	NR	NR	NA	N	NR	N
67-64-1	Acetone	N	NR	NR	A,C,F	N	5,000	N
123-86-4	Butyl acetate	N	NR	NR	A,C,F	N	NR	N
110-43-0	Methyl amyl ketone	N	NR	NR	A,C,F	N	NR	N
13463-67-7	Titanium dioxide	N	NR	NR	,A,C,F,N,R	N	NR	N
763-69-9	Ethyl 3-ethoxy propionate	N	NR	NR	NA	N	NR	N
141-78-6	Ethyl acetate	N	NR	NR	C,F	N	NR	N
78-93-3	Methyl ethyl ketone	N	NR	NR	A,C,F	N	5,000	N
100-41-4	Ethylbenzene	N	NR	NR	A,C,F	Y	1,000	Y

Key:

EPCRA	Emergency Planning and Community Right-to-know Act (aka Title III, SARA)
302	Extremely hazardous substances
311/312 Categories	F = Fire Hazard R = Reactivity Hazard P = Pressure Related Hazard A = Acute Hazard C = Chronic Hazard
313 Information	Section 313 Supplier Notification - The chemicals listed above with a 'Y' in the 313 column are subject to reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know act of 1986 and of 40 CFR 372.
CERCLA	Comprehensive Emergency Response, Compensation and Liability Act of 1980.
HAP	Listed as a Clean Air Act Hazardous Air Pollutant.
TPQ	Threshold Planning Quantity.
RQ	Reportable Quantity
NA	not available

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NR	not regulated

16. Other information

HMIS rating H: 2 F: 2 R: 0

Glossary of Terms:

ACGIH	American Conference of Governmental Industrial Hygienists.
IARC	International Agency for Research on Cancer.
NTP	National Toxicology Program.
OEL	Occupational Exposure Limit
OSHA	Occupational Safety and Health Administration.
STEL	Short term exposure limit.
TWA	Time-weighted average.
PNOR	Particles not otherwise regulated.
PNOC	Particles not otherwise classified.

NOTE: The list (above) of glossary terms may be modified.

Notice from Axalta Coating Systems
The document reflects information provided to Axalta Coating Systems by its suppliers. Information is accurate to the best of our knowledge and is subject to change as new data is received by Axalta Coating Systems. Persons receiving this information should make their own determination as to its suitability for their purposes prior to use. The information on this Material Safety Data Sheet relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process.
SDS prepared by:
Axalta Coating Systems Regulatory Affairs
Report version

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MMRX-02460

1. Identification of the substance/mixture and of the company/undertaking

Product name	COLOR ATLAS GREEN	
Product code	CAS364	
Intended use	Coating for professional use	
	Axalta Coating Systems, LLC Applied Corporate Center 50 Applied Card Way, Suite 300 US Glen Mills, PA 19342	
Telephone	Product information Medical emergency Transportation emergency	(855) 6-AXALTA (855) 274-5698 (800) 424-9300 (CHEMTREC)

2. Hazards identification

This preparation is hazardous per the following GHS criteria

GHS-Classification

Flammable liquids	Category 3
Target Organ Systemic Toxicant - Repeated exposure	Category 2

Endpoints which are ""not classified"", ""cannot classified"" and ""not applicable"" are not shown

GHS-Labelling

Hazard symbols	
Signal word	Warning
Hazard statements	Flammable liquid and vapour. May cause damage to organs through prolonged or repeated exposure.
Precautionary statements	Do not breathe dust/ fume/ gas/ mist/ vapours/ spray. Ground/bond container and receiving equipment. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Keep container tightly closed. Take precautionary measures against static discharge. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Wear protective gloves/ eye protection/ face protection. Get medical advice/ attention if you feel unwell. IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower. Store in a well-ventilated place. Keep cool. Dispose of contents/container in accordance with local regulations.

Other hazards which do not result in classification
None known.

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The following percentage of the mixture consists of ingredient(s) with unknown acute toxicity:
13.5 %

3. Composition/information on ingredients

Mixture of synthetic resins, pigments, and solvents

Components

CAS-No.	Chemical Name	Concentration	GHS Hazardous
No information available.	Acrylic polymer	20 - 30%	
123-86-4	Butyl acetate	15 - 26%	√
13463-67-7	Titanium dioxide	14.9%	
14059-33-7	Bismuth vanadium oxide	9%	
69153-52-2	Polyester resin	5 - 10%	
110-43-0	Methyl amyl ketone	4 - 15%	√
67-64-1	Acetone	1 - 4%	√
No information available.	Acrylic resin	1 - 5%	
68134-22-5	C.I. pigment yellow 154	1 - 5%	
141-78-6	Ethyl acetate	1 - 4%	√
67-63-0	Isopropyl alcohol	1 - 4%	√
78-93-3	Methyl ethyl ketone	1 - 4%	√
1328-53-6	Phthalocyanine green	1 - 5%	
14059-33-7	Yellow bismuth vandate pigment	1%	√

OSHA Hazardous: Yes
* Assigned CAS No. - An official CAS No. does not exist. The CAS No. shown is for a similar chemical.

4. First aid measures

Eye contact
Remove contact lenses. Irrigate copiously with clean, fresh water for at least 15 minutes, holding the eyelids apart. Seek medical advice.

Skin contact
Do NOT use solvents or thinners. Take off all contaminated clothing immediately. Wash skin thoroughly with soap and water or use recognized skin cleanser. If skin irritation persists, call a physician.

Inhalation
Avoid inhalation of vapour or mist. Move to fresh air in case of accidental inhalation of vapours. If breathing is irregular or stopped, administer artificial respiration. If unconscious place in recovery position and seek medical advice. If symptoms persist, call a physician.

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Ingestion
If swallowed, seek medical advice immediately and show this container or label. Do NOT induce vomiting. Keep at rest.

Most Important Symptoms/effects, acute and delayed

Inhalation
Ingestion
May result in gastrointestinal distress.

Skin or eye contact
May cause irritation or burning of the eyes. Repeated or prolonged liquid contact may cause skin irritation with discomfort and dermatitis.

Indication of immediate medical attention and special treatment needed if necessary
No data available on the product. See section 3 and 11 for hazardous ingredients found in the product.

5. Firefighting measures

Suitable extinguishing media
Extinguishing media which shall not be used for safety reasons
High volume water jet

Hazardous combustion products
CO, CO2, smoke, and oxides of any heavy metals that are reported in "Composition, Information on Ingredients" section.

Fire and Explosion Hazards
Combustible liquid. When heated above the flashpoint, emits vapors which, when mixed with air, will burn if an ignition source is present. Fine mist or sprays could ignite at temperatures below the flashpoint.

Special Protective Equipment and Fire Fighting Procedures
Full protective flameproof clothing should be worn as appropriate. Wear self contained breathing apparatus for fire fighting if necessary. In the event of fire, cool tanks with water spray. Do not allow run-off from fire fighting to enter public sewer systems or public waterways.

6. Accidental release measures

Procedures for cleaning up spills or leaks
Ventilate area. If heated above the flashpoint, remove sources of ignition. Prevent skin and eye contact and breathing of vapor. Wear a properly fitted air-purifying respirator with organic vapor cartridges (NIOSH approved TC-23C), eye protection, gloves and protective clothing. Confine, remove with inert absorbent, and dispose of properly.

Environmental precautions
Do not let product enter drains. Notify the respective authorities in accordance with local law in the case of contamination of rivers, lakes or waste water systems.

7. Handling and storage

Precautions for safe handling
Observe label precautions. Keep away from heat, flame and other sources of ignition. When heated above its flash point, this must be handled as if it were a flammable liquid. Close container after each use. Do not transfer contents to bottles or unlabeled containers. Wash thoroughly after handling and before eating or smoking.
If material is a coating: do not sand, flame cut, braze or weld dry coating without a NIOSH approved air purifying respirator with particulate filters or appropriate ventilation, and gloves. Combustible dust clouds may be created where operations produce fine material (dust). Avoid formation of significant deposits of material as they may become airborne and form combustible dust clouds. Build up of fine material should be cleaned using gentle sweeping or vacuuming in accordance with best practices. Cleaning methods (e.g. compressed air) which can generate potentially combustible dust clouds should not be used.

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Advice on protection against fire and explosion
Solvent vapours are heavier than air and may spread along floors. Vapors may form explosive mixtures with air and will burn when an ignition source is present. Always keep in containers of same material as the original one. Never use pressure to empty container: container is not a pressure vessel. The accumulation of contaminated rags may result in spontaneous combustion. Good housekeeping standards and regular safe removal of waste materials will minimize the risks of spontaneous combustion and other fire hazards.

Storage
Requirements for storage areas and containers
Observe label precautions. Store in a dry, well ventilated place away from sources of heat, ignition and direct sunlight. No smoking. Prevent unauthorized access. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Advice on common storage
Store separately from oxidizing agents and strongly alkaline and strongly acidic materials.

OSHA/NFPA Storage Classification: II

8. Exposure controls/personal protection

Engineering controls and work practices
Provide adequate ventilation. This should be achieved by a good general extraction and -if practically feasible- by the use of a local exhaust ventilation. If these are not sufficient to maintain concentrations of particulates and solvent vapour below the OEL, suitable respiratory protection must be worn.

National occupational exposure limits

CAS-No.	Chemical Name	Source	Time	Type	Value	Note
123-86-4	Butyl acetate	ACGIH	15 min	STEL	200 ppm	
			8 hr	TWA	150 ppm	
		OSHA	8 hr	TWA	150 ppm	
13463-67-7	Titanium dioxide	OSHA	8 hr	TWA	15 mg/m3	Total Dust
		Dupont	8 & 12 hour	TWA	10 mg/m3	Total Dust
			8 & 12 hour	TWA	5 mg/m3	Respirable Dust
110-43-0	Methyl amyl ketone	ACGIH	8 hr	TWA	50 ppm	
		OSHA	8 hr	TWA	100 ppm	
67-64-1	Acetone	ACGIH	15 min	STEL	750 ppm	
			8 hr	TWA	500 ppm	
		OSHA	8 hr	TWA	1,000 ppm	
		Dupont	8 & 12 hour	TWA	500 ppm	
141-78-6	Ethyl acetate	ACGIH	8 hr	TWA	400 ppm	
		OSHA	8 hr	TWA	400 ppm	
78-93-3	Methyl ethyl ketone	ACGIH	15 min	STEL	300 ppm	

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CAS-No.	Chemical Name	Source	Time	Type	Value	Note
			8 hr	TWA	200 ppm	
		OSHA	8 hr	TWA	200 ppm	
		Dupont	15 min	TWA	300 ppm	
			8 & 12 hour	TWA	200 ppm	
1328-53-6	Phthalocyanine green	ACGIH		TWA	3 mg/m3	Respirable Dust
				TWA	10 mg/m3	Inhalable dust
		OSHA		TWA	15 mg/m3	Total Dust
				TWA	5 mg/m3	Respirable Dust

** STEL = Short term exposure limit.
TWA = Time-weighted average,

Protective equipment
Personal protective equipment should be worn to prevent contact with eyes, skin or clothing.

Respiratory protection
Do not breathe vapors or mists. Wear an appropriate, properly fitted NIOSH approved respirator during application and until all vapors and spray mists are exhausted unless air monitoring demonstrates vapor/mist levels are below applicable limits. If respirators are required, use a properly fitted air-purifying respirator with organic vapor cartridges (NIOSH approved TC-23C) and particulate filter (NIOSH TC-84A). In confined spaces, or in situations where continuous spray operations are typical, or if proper air-purifying respirator fit is not possible, wear a positive pressure, supplied-air respirator (NIOSH TC-19C). In all cases, follow respirator manufacturer's directions for respirator use.'

Eye protection
Desirable in all industrial situations. Goggles are preferred to prevent eye irritation. If safety glasses are substituted, include splash guard or side shields.

Skin and body protection
Neoprene gloves and coveralls are recommended.

Hygiene measures
Wash skin thoroughly with soap and water or use recognized skin cleanser. Do NOT use solvents or thinners.

Environmental exposure controls
Do not let product enter drains. For ecological information, refer to Ecological Information Section 12.

9. Physical and chemical properties

Appearance

Form: liquid Colour:

Flash point	104 °F

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Ignition temperature	290 °C	
Lower Explosive Limit	1.1 %	
Upper Explosive Limit	10.3 %	
Evapouration rate	Slower than Ether	
Vapor pressure of principal solvent	12.2 hPa	
Water solubility	moderate	
Vapor density of principal solvent (Air = 1)	4	
Approx. Boiling Range	152 °C	
Approx. Freezing Range	Not applicable.	
Gallon Weight (lbs/gal)	10.52	
Specific Gravity	1.26	
Percent Volatile By Volume	52.77%	
Percent Volatile By Weight	35.75%	
Percent Solids By Volume	47.23%	
Percent Solids By Weight	64.25%	
pH (waterborne systems only)	Not applicable.	
Partition coefficient: n-octanol/water	no data available	
Ignition temperature	290 °C	DIN 51794
Decomposition temperature		
Viscosity (23 °C)	Not applicable.	ISO 2431-1993
VOC* less exempt (lbs/gal)	3.7	
VOC* as packaged (lbs/gal)	3.6	
VOC LE (TBAC)	3.7	
VOC AP (TBAC)	3.5	

* VOC less exempt (theoretical) and VOC as packaged (theoretical) are based upon the VOC of the packaged material at the point of manufacture.
TBAC is not universally recognized as an exempt solvent.
Users should consult the applicable regulations for their region.

10. Stability and reactivity

Stability
Stable

Conditions to avoid
Stable under recommended storage conditions.

Materials to avoid
None reasonably foreseeable.

Hazardous decomposition products
When exposed to high temperatures may produce hazardous decomposition products such as carbon monoxide and dioxide, smoke, oxides of nitrogen.

Hazardous Polymerization
Will not occur.

Sensitivity to Static Discharge
If heated above the flash point, solvent vapors in air may explode if static grounding and bonding is not used during transfer of this product.

Sensitivity to Mechanical Impact
None known.

11. Toxicological information

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Information on likely routes of exposure

Inhalation
Ingestion
May result in gastrointestinal distress.

Skin or eye contact
May cause irritation or burning of the eyes. Repeated or prolonged liquid contact may cause skin irritation with discomfort and dermatitis.

Delayed and immediate effects and also chronic effects from short and long term exposure:

Acute oral toxicity
not hazardous

Acute dermal toxicity
Not classified according to GHS criteria

Acute inhalation toxicity
not hazardous

% of unknown composition 13.5 %

Skin corrosion/irritation
Not classified according to GHS criteria

Serious eye damage/eye irritation
Not classified according to GHS criteria

Respiratory sensitisation
Not classified according to GHS criteria

Skin sensitisation
Not classified according to GHS criteria

Germ cell mutagenicity
Not classified according to GHS criteria

Carcinogenicity
Not classified according to GHS criteria

Toxicity for reproduction
Not classified according to GHS criteria

Target Organ Systemic Toxicant - Single exposure
Not classified according to GHS criteria

Target Organ Systemic Toxicant - Repeated exposure

- **Skin Absorption**

  Body weight effects ethyl acetate

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Aspiration toxicity
Not classified according to GHS criteria

Numerical measures of toxicity (acute toxicity estimation (ATE),etc.)
No information available.

Symptoms related to the physical, chemical and toxicological characteristics
Exposure to component solvents vapours concentration in excess of the stated occupational exposure limit may result in adverse health effect such as mucous membrane and respiratory system irritation and adverse effect on kidney, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness. Through skin resorbtion, solvents can cause some of the effects described here. Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin resulting in non-allergic contact dermatitis and absorption through the skin. The liquid splashed in the eyes may cause irritation and reversible damage.

Whether the hazardous chemical is listed by NTP, IARC or OSHA

Titanium dioxide	IARC 2B

12. Ecological information

There are no data available on the product itself. The product should not be allowed to enter drains or watercourses. The product contains an organic linked halogen. It may contribute to the AOX-value.

13. Disposal considerations

Waste Disposal Method
Do not allow material to contaminate ground water systems. Incinerate or otherwise dispose of waste material in accordance with Federal, State, Provincial, and local requirements. Do not incinerate in closed containers.

14. Transport information

International transport regulations

IMDG (Sea transport)	
UN number:	1263
Proper shipping name:	PAINT
Hazard Class:	3
Subsidiary Hazard Class:	Not applicable.
Packing group:	III
Marine Pollutant:	no
ICAO/IATA (Air transport)	
UN number:	1263
Proper shipping name:	PAINT
Hazard Class:	3
Subsidiary Hazard Class:	Not applicable.
Packing group:	III
DOT	
UN number:	1263
Proper shipping name:	PAINT
Hazard Class:	3
Subsidiary Hazard Class:	Not applicable.
Packing group:	III

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Marine Pollutant:	no
EmS:	F-E,S-E

Matters needing attention for transportation
Confirm that there is no breakage, corrosion, or leakage from the container before shipping. Be sure to prevent damage to cargo by loading so as to avoid falling, dropping, or collapse. Ship in appropriate containers with denotation of the content in accordance with the relevant statutes and rules.

15. Regulatory information

TSCA Status
In compliance with TSCA Inventory requirements for commercial purposes.

DSL Status
Product is not DSL listed because one or more ingredients are not on the DSL inventory.

Photochemical Reactivity
Non-photochemically reactive

Regulatory information

		EPCRA					CERCLA	CAA
CAS #	Ingredient	302	TPQ	RQ	311 - 312	313	RQ(lbs)	HAP
No information available.	Acrylic polymer	N	NR	NR	NA	N	NR	N
123-86-4	Butyl acetate	N	NR	NR	A,C,F	N	NR	N
13463-67-7	Titanium dioxide	N	NR	NR	,A,C,F,N,R	N	NR	N
14059-33-7	Bismuth vanadium oxide	N	NR	NR	,A,C,F,N,R	Y	NR	N
69153-52-2	Polyester resin	N	NR	NR	NA	N	NR	N
110-43-0	Methyl amyl ketone	N	NR	NR	A,C,F	N	NR	N
67-64-1	Acetone	N	NR	NR	A,C,F	N	5,000	N
No information available.	Acrylic resin	N	NR	NR	NA	N	NR	N
68134-22-5	C.I. pigment yellow 154	N	NR	NR	NA	N	NR	N
141-78-6	Ethyl acetate	N	NR	NR	C,F	N	NR	N
67-63-0	Isopropyl alcohol	N	NR	NR	,A,C,F,N,R	N	NR	N
78-93-3	Methyl ethyl ketone	N	NR	NR	A,C,F	N	5,000	N
1328-53-6	Phthalocyanine green	N	NR	NR	,A,C,F,N,R	N	NR	N
14059-33-7	Yellow bismuth vandate pigment	N	NR	NR	NA	Y	NR	N

Key:

EPCRA	Emergency Planning and Community Right-to-know Act (aka Title III, SARA)
302	Extremely hazardous substances
311/312 Categories	F = Fire Hazard R = Reactivity Hazard P = Pressure Related Hazard A = Acute Hazard C = Chronic Hazard
313 Information	Section 313 Supplier Notification - The chemicals listed above with a 'Y' in the 313 column are subject to reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know act of 1986 and of 40 CFR 372.
CERCLA	Comprehensive Emergency Response, Compensation and Liability Act of 1980.
HAP	Listed as a Clean Air Act Hazardous Air Pollutant.
TPQ	Threshold Planning Quantity.
RQ	Reportable Quantity

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MMRX-002465

NA	not available
NR	not regulated

16. Other information

HMIS rating H: 2 F: 2 R: 0

Glossary of Terms:

ACGIH	American Conference of Governmental Industrial Hygienists.
IARC	International Agency for Research on Cancer.
NTP	National Toxicology Program.
OEL	Occupational Exposure Limit
OSHA	Occupational Safety and Health Administration.
STEL	Short term exposure limit.
TWA	Time-weighted average.
PNOR	Particles not otherwise regulated.
PNOC	Particles not otherwise classified.

NOTE: The list (above) of glossary terms may be modified.

Notice from Axalta Coating Systems
The document reflects information provided to Axalta Coating Systems by its suppliers. Information is accurate to the best of our knowledge and is subject to change as new data is received by Axalta Coating Systems. Persons receiving this information should make their own determination as to its suitability for their purposes prior to use. The information on this Material Safety Data Sheet relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process.
SDS prepared by:
Axalta Coating Systems Regulatory Affairs
Report version

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MMRX-02465

1. Identification of the substance/mixture and of the company/undertaking

Product name	COLOR ATLAS GREEN	
Product code	CAS367	
Intended use	Coating for professional use	
	Axalta Coating Systems, LLC Applied Corporate Center 50 Applied Card Way, Suite 300 US Glen Mills, PA 19342	
Telephone	Product information Medical emergency Transportation emergency	(855) 6-AXALTA (855) 274-5698 (800) 424-9300 (CHEMTREC)

2. Hazards identification

This preparation is hazardous per the following GHS criteria

GHS-Classification

Flammable liquids Category 3

Endpoints which are ""not classified"", ""cannot classified"" and ""not applicable"" are not shown

GHS-Labelling

Hazard symbols	
Signal word	Warning
Hazard statements	Flammable liquid and vapour.
Precautionary statements	Ground/bond container and receiving equipment. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Keep container tightly closed. Take precautionary measures against static discharge. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Wear protective gloves/ eye protection/ face protection. IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower. Store in a well-ventilated place. Keep cool. Dispose of contents/container in accordance with local regulations.

Other hazards which do not result in classification
None known.

The following percentage of the mixture consists of ingredient(s) with unknown acute toxicity:
16.6 %

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3. Composition/information on ingredients

Mixture of synthetic resins, pigments, and solvents

Components

CAS-No.	Chemical Name	Concentration	GHS Hazardous
No information available.	Acrylic polymer	30 - 40%	
123-86-4	Butyl acetate	15 - 26%	√
68134-22-5	C.i. pigment yellow 154	5 - 10%	
69153-52-2	Polyester resin	5 - 10%	
110-43-0	Methyl amyl ketone	4 - 15%	√
67-64-1	Acetone	1 - 4%	√
No information available.	Acrylic resin	1 - 5%	
763-69-9	Ethyl 3-ethoxy propionate	1 - 4%	√
141-78-6	Ethyl acetate	1 - 4%	√
67-63-0	Isopropyl alcohol	1 - 4%	√
78-93-3	Methyl ethyl ketone	1 - 4%	√
1328-53-6	Phthalocyanine green	1 - 5%	
13463-67-7	Titanium dioxide	0.4%	

OSHA Hazardous: Yes
* Assigned CAS No. - An official CAS No. does not exist. The CAS No. shown is for a similar chemical.

4. First aid measures

Eye contact
Remove contact lenses. Irrigate copiously with clean, fresh water for at least 15 minutes, holding the eyelids apart. Seek medical advice.

Skin contact
Do NOT use solvents or thinners. Take off all contaminated clothing immediately. Wash skin thoroughly with soap and water or use recognized skin cleanser. If skin irritation persists, call a physician.

Inhalation
Avoid inhalation of vapour or mist. Move to fresh air in case of accidental inhalation of vapours. If breathing is irregular or stopped, administer artificial respiration. If unconscious place in recovery position and seek medical advice. If symptoms persist, call a physician.

Ingestion
If swallowed, seek medical advice immediately and show this container or label. Do NOT induce vomiting. Keep at rest.

Most Important Symptoms/effects, acute and delayed

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MMRX-02468

Inhalation
Ingestion
May result in gastrointestinal distress.

Skin or eye contact
May cause irritation or burning of the eyes. Repeated or prolonged liquid contact may cause skin irritation with discomfort and dermatitis.

Indication of immediate medical attention and special treatment needed if necessary
No data available on the product. See section 3 and 11 for hazardous ingredients found in the product.

5. Firefighting measures

Suitable extinguishing media
Extinguishing media which shall not be used for safety reasons
High volume water jet

Hazardous combustion products
CO, CO2, smoke, and oxides of any heavy metals that are reported in "Composition, Information on Ingredients" section.

Fire and Explosion Hazards
Combustible liquid. When heated above the flashpoint, emits vapors which, when mixed with air, will burn if an ignition source is present. Fine mist or sprays could ignite at temperatures below the flashpoint.

Special Protective Equipment and Fire Fighting Procedures
Full protective flameproof clothing should be worn as appropriate. Wear self contained breathing apparatus for fire fighting if necessary. In the event of fire, cool tanks with water spray. Do not allow run-off from fire fighting to enter public sewer systems or public waterways.

6. Accidental release measures

Procedures for cleaning up spills or leaks
Ventilate area. If heated above the flashpoint, remove sources of ignition. Prevent skin and eye contact and breathing of vapor. Wear a properly fitted air-purifying respirator with organic vapor cartridges (NIOSH approved TC-23C), eye protection, gloves and protective clothing. Confine, remove with inert absorbent, and dispose of properly.

Environmental precautions
Do not let product enter drains. Notify the respective authorities in accordance with local law in the case of contamination of rivers, lakes or waste water systems.

7. Handling and storage

Precautions for safe handling
Observe label precautions. Keep away from heat, flame and other sources of ignition. When heated above its flash point, this must be handled as if it were a flammable liquid. Close container after each use. Do not transfer contents to bottles or unlabeled containers. Wash thoroughly after handling and before eating or smoking.
If material is a coating: do not sand, flame cut, braze or weld dry coating without a NIOSH approved air purifying respirator with particulate filters or appropriate ventilation, and gloves. Combustible dust clouds may be created where operations produce fine material (dust). Avoid formation of significant deposits of material as they may become airborne and form combustible dust clouds. Build up of fine material should be cleaned using gentle sweeping or vacuuming in accordance with best practices. Cleaning methods (e.g. compressed air) which can generate potentially combustible dust clouds should not be used.

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MMPDX-02468

Advice on protection against fire and explosion
Solvent vapours are heavier than air and may spread along floors. Vapors may form explosive mixtures with air and will burn when an ignition source is present. Always keep in containers of same material as the original one. Never use pressure to empty container: container is not a pressure vessel. The accumulation of contaminated rags may result in spontaneous combustion. Good housekeeping standards and regular safe removal of waste materials will minimize the risks of spontaneous combustion and other fire hazards.

Storage
Requirements for storage areas and containers
Observe label precautions. Store in a dry, well ventilated place away from sources of heat, ignition and direct sunlight. No smoking. Prevent unauthorized access. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Advice on common storage
Store separately from oxidizing agents and strongly alkaline and strongly acidic materials.

OSHA/NFPA Storage Classification: II

8. Exposure controls/personal protection

Engineering controls and work practices
Provide adequate ventilation. This should be achieved by a good general extraction and -if practically feasible- by the use of a local exhaust ventilation. If these are not sufficient to maintain concentrations of particulates and solvent vapour below the OEL, suitable respiratory protection must be worn.

National occupational exposure limits

CAS-No.	Chemical Name	Source	Time	Type	Value	Note
123-86-4	Butyl acetate	ACGIH	15 min	STEL	200 ppm	
			8 hr	TWA	150 ppm	
		OSHA	8 hr	TWA	150 ppm	
110-43-0	Methyl amyl ketone	ACGIH	8 hr	TWA	50 ppm	
		OSHA	8 hr	TWA	100 ppm	
67-64-1	Acetone	ACGIH	15 min	STEL	750 ppm	
			8 hr	TWA	500 ppm	
		OSHA	8 hr	TWA	1,000 ppm	
		Dupont	8 & 12 hour	TWA	500 ppm	
141-78-6	Ethyl acetate	ACGIH	8 hr	TWA	400 ppm	
		OSHA	8 hr	TWA	400 ppm	
78-93-3	Methyl ethyl ketone	ACGIH	15 min	STEL	300 ppm	
			8 hr	TWA	200 ppm	
		OSHA	8 hr	TWA	200 ppm	
		Dupont	15 min	TWA	300 ppm	
			8 & 12 hour	TWA	200 ppm	

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CAS-No.	Chemical Name	Source	Time	Type	Value	Note
1328-53-6	Phthalocyanine green	ACGIH		TWA	3 mg/m3	Respirable Dust
				TWA	10 mg/m3	inhalable dust
		OSHA		TWA	15 mg/m3	Total Dust
				TWA	5 mg/m3	Respirable Dust
13463-67-7	Titanium dioxide	OSHA	8 hr	TWA	15 mg/m3	Total Dust
		Dupont	8 & 12 hour	TWA	10 mg/m3	Total Dust
			8 & 12 hour	TWA	5 mg/m3	Respirable Dust

** STEL = Short term exposure limit.
TWA = Time-weighted average.

Protective equipment
Personal protective equipment should be worn to prevent contact with eyes, skin or clothing.

Respiratory protection
Do not breathe vapors or mists. Wear an appropriate, properly fitted NIOSH approved respirator during application and until all vapors and spray mists are exhausted unless air monitoring demonstrates vapor/mist levels are below applicable limits. If respirators are required, use a properly fitted air-purifying respirator with organic vapor cartridges (NIOSH approved TC-23C) and particulate filter (NIOSH TC-84A). In confined spaces, or in situations where continuous spray operations are typical, or if proper air-purifying respirator fit is not possible, wear a positive pressure, supplied-air respirator (NIOSH TC-19C). In all cases, follow respirator manufacturer's directions for respirator use.'

Eye protection
Desirable in all industrial situations. Goggles are preferred to prevent eye irritation. If safety glasses are substituted, include splash guard or side shields.

Skin and body protection
Neoprene gloves and coveralls are recommended.

Hygiene measures
Wash skin thoroughly with soap and water or use recognized skin cleanser. Do NOT use solvents or thinners.

Environmental exposure controls
Do not let product enter drains. For ecological information, refer to Ecological Information Section 12.

9. Physical and chemical properties

Appearance

Form: liquid Colour:

Flash point	104 °F

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Ignition temperature	290 °C	
Lower Explosive Limit	1.1 %	
Upper Explosive Limit	10.3 %	
Evapouration rate	Slower than Ether	
Vapor pressure of principal solvent	18.0 hPa	
Water solubility	moderate	
Vapor density of principal solvent (Air = 1)	4	
Approx. Boiling Range	152 °C	
Approx. Freezing Range	Not applicable.	
Gallon Weight (lbs/gal)	8.52	
Specific Gravity	1.02	
Percent Volatile By Volume	53.67%	
Percent Volatile By Weight	44.66%	
Percent Solids By Volume	46.33%	
Percent Solids By Weight	55.34%	
pH (waterborne systems only)	Not applicable.	
Partition coefficient: n-octanol/water	no data available	
Ignition temperature	290 °C	DIN 51794
Decomposition temperature		
Viscosity (23 °C)	Not applicable.	ISO 2431-1993
VOC* less exempt (lbs/gal)	3.7	
VOC* as packaged (lbs/gal)	3.5	
VOC LE (TBAC)	3.6	
VOC AP (TBAC)	3.4	

* VOC less exempt (theoretical) and VOC as packaged (theoretical) are based upon the VOC of the packaged material at the point of manufacture.
TBAC is not universally recognized as an exempt solvent.
Users should consult the applicable regulations for their region.

10. Stability and reactivity

Stability
Stable

Conditions to avoid
Stable under recommended storage conditions.

Materials to avoid
None reasonably foreseeable.

Hazardous decomposition products
When exposed to high temperatures may produce hazardous decomposition products such as carbon monoxide and dioxide, smoke, oxides of nitrogen.

Hazardous Polymerization
Will not occur.

Sensitivity to Static Discharge
If heated above the flash point, solvent vapors in air may explode if static grounding and bonding is not used during transfer of this product.

Sensitivity to Mechanical Impact
None known.

11. Toxicological information

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Information on likely routes of exposure

Inhalation
Ingestion
May result in gastrointestinal distress.

Skin or eye contact
May cause irritation or burning of the eyes. Repeated or prolonged liquid contact may cause skin irritation with discomfort and dermatitis.

Delayed and immediate effects and also chronic effects from short and long term exposure:

Acute oral toxicity
not hazardous

Acute dermal toxicity
not hazardous

Acute inhalation toxicity
not hazardous

% of unknown composition 16.6 %

Skin corrosion/irritation
Not classified according to GHS criteria

Serious eye damage/eye irritation
Not classified according to GHS criteria

Respiratory sensitisation
Not classified according to GHS criteria

Skin sensitisation
Not classified according to GHS criteria

Germ cell mutagenicity
Not classified according to GHS criteria

Carcinogenicity
Not classified according to GHS criteria

Toxicity for reproduction
Not classified according to GHS criteria

Target Organ Systemic Toxicant - Single exposure
Not classified according to GHS criteria

Target Organ Systemic Toxicant - Repeated exposure
Not classified according to GHS criteria

Aspiration toxicity
Not classified according to GHS criteria

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Numerical measures of toxicity (acute toxicity estimation (ATE),etc.)
No information available.

Symptoms related to the physical, chemical and toxicological characteristics
Exposure to component solvents vapours concentration in excess of the stated occupational exposure limit may result in adverse health effect such as mucous membrane and respiratory system irritation and adverse effect on kidney, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness. Through skin resorbtion, solvents can cause some of the effects described here. Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin resulting in non-allergic contact dermatitis and absorption through the skin. The liquid splashed in the eyes may cause irritation and reversible damage.

Whether the hazardous chemical is listed by NTP, IARC or OSHA

Titanium dioxide	IARC 2B

12. Ecological information

There are no data available on the product itself. The product should not be allowed to enter drains or watercourses. The product contains an organic linked halogen. It may contribute to the AOX-value.

13. Disposal considerations

Waste Disposal Method
Do not allow material to contaminate ground water systems. Incinerate or otherwise dispose of waste material in accordance with Federal, State, Provincial, and local requirements. Do not incinerate in closed containers.

14. Transport information

International transport regulations

IMDG (Sea transport)	
UN number:	1263
Proper shipping name:	PAINT
Hazard Class:	3
Subsidiary Hazard Class:	Not applicable.
Packing group:	III
Marine Pollutant:	no
ICAO/IATA (Air transport)	
UN number:	1263
Proper shipping name:	PAINT
Hazard Class:	3
Subsidiary Hazard Class:	Not applicable.
Packing group:	III
DOT	
UN number:	1263
Proper shipping name:	PAINT
Hazard Class:	3
Subsidiary Hazard Class:	Not applicable.
Packing group:	III
Marine Pollutant:	no
EmS:	F-E,S-E

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Matters needing attention for transportation
Confirm that there is no breakage, corrosion, or leakage from the container before shipping. Be sure to prevent damage to cargo by loading so as to avoid falling, dropping, or collapse. Ship in appropriate containers with denotation of the content in accordance with the relevant statutes and rules.

15. Regulatory information

TSCA Status
In compliance with TSCA Inventory requirements for commercial purposes.

DSL Status
Product is not DSL listed because one or more ingredients are not on the DSL inventory.

Photochemical Reactivity
Non-photochemically reactive

Regulatory information

		EPCRA					CERCLA	CAA
CAS #	Ingredient	302	TPQ	RQ	311 - 312	313	RQ(lbs)	HAP
No information available.	Acrylic polymer	N	NR	NR	NA	N	NR	N
123-86-4	Butyl acetate	N	NR	NR	A,C,F	N	NR	N
68134-22-5	C.i. pigment yellow 154	N	NR	NR	NA	N	NR	N
69153-52-2	Polyester resin	N	NR	NR	NA	N	NR	N
110-43-0	Methyl amyl ketone	N	NR	NR	A,C,F	N	NR	N
67-64-1	Acetone	N	NR	NR	A,C,F	N	5,000	N
No information available.	Acrylic resin	N	NR	NR	NA	N	NR	N
763-69-9	Ethyl 3-ethoxy propionate	N	NR	NR	NA	N	NR	N
141-78-6	Ethyl acetate	N	NR	NR	C,F	N	NR	N
67-63-0	Isopropyl alcohol	N	NR	NR	,A,C,F,N,R	N	NR	N
78-93-3	Methyl ethyl ketone	N	NR	NR	A,C,F	N	5,000	N
1328-53-6	Phthalocyanine green	N	NR	NR	,A,C,F,N,R	N	NR	N
13463-67-7	Titanium dioxide	N	NR	NR	,A,C,F,N,R	N	NR	N

Key:

EPCRA	Emergency Planning and Community Right-to-know Act (aka Title III, SARA)
302	Extremely hazardous substances
311/312 Categories	F = Fire Hazard R = Reactivity Hazard P = Pressure Related Hazard A = Acute Hazard C = Chronic Hazard
313 Information	Section 313 Supplier Notification - The chemicals listed above with a 'Y' in the 313 column are subject to reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know act of 1986 and of 40 CFR 372.
CERCLA	Comprehensive Emergency Response, Compensation and Liability Act of 1980.
HAP	Listed as a Clean Air Act Hazardous Air Pollutant.
TPQ	Threshold Planning Quantity.
RQ	Reportable Quantity
NA	not available
NR	not regulated

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16. Other information

HMIS rating H: 2 F: 2 R: 0

Glossary of Terms:

ACGIH	American Conference of Governmental Industrial Hygienists.
IARC	International Agency for Research on Cancer.
NTP	National Toxicology Program.
OEL	Occupational Exposure Limit
OSHA	Occupational Safety and Health Administration.
STEL	Short term exposure limit.
TWA	Time-weighted average.
PNOR	Particles not otherwise regulated.
PNOC	Particles not otherwise classified.

NOTE: The list (above) of glossary terms may be modified.

Notice from Axalta Coating Systems
The document reflects information provided to Axalta Coating Systems by its suppliers. Information is accurate to the best of our knowledge and is subject to change as new data is received by Axalta Coating Systems. Persons receiving this information should make their own determination as to its suitability for their purposes prior to use. The information on this Material Safety Data Sheet relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process.
SDS prepared by:
Axalta Coating Systems Regulatory Affairs
Report version

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1. Identification of the substance/mixture and of the company/undertaking

Product name	COLOR ATLAS BLUE	
Product code	CAS523EW	
Intended use	Coating for professional use	
	Axalta Coating Systems, LLC Applied Corporate Center 50 Applied Card Way, Suite 300 US Glen Mills, PA 19342	
Telephone	Product information Medical emergency Transportation emergency	(855) 6-AXALTA (855) 274-5698 (800) 424-9300 (CHEMTREC)
Chemical Family	No data available.	

2. Composition/information on ingredients

CAS-No.	Chemical Name	Concentration
13463-67-7	Titanium dioxide	32.8%
No information available.	Acrylic polymer	10 - 20%
123-86-4	Butyl acetate	10 - 20%
110-43-0	Methyl amyl ketone	5 - 10%
69153-52-2	Polyester resin	5 - 10%
67-64-1	Acetone	1 - 5%
No information available.	Acrylic resin	1 - 5%
21645-51-2	Aluminum hydroxide	1 - 5%
7631-86-9	Amorphous silica	1 - 5%
763-69-9	Ethyl 3-ethoxy propionate	1 - 5%
141-78-6	Ethyl acetate	1 - 5%
78-93-3	Methyl ethyl ketone	1 - 5%

OSHA Hazardous: Yes

3. Hazards identification

Emergency Overview
WARNING! COMBUSTIBLE LIQUID AND VAPOR. VAPORS AND SPRAY MIST HARMFUL IF INHALED. MAY CAUSE CENTRAL NERVOUS SYSTEM EFFECTS SUCH AS DIZZINESS, HEADACHE, OR NAUSEA. MAY CAUSE NOSE, THROAT, EYE AND SKIN IRRITATION. CAN BE ABSORBED THROUGH THE SKIN.

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Potential Health Effects
Inhalation
Ingestion
May result in gastrointestinal distress.

Skin or eye contact
May cause irritation or burning of the eyes. Repeated or prolonged liquid contact may cause skin irritation with discomfort and dermatitis.

Other Potential Health Effects in addition to those listed above
Titanium dioxide
Is an IARC, NTP or OSHA carcinogen. In a lifetime inhalation test, lung cancers were found in some rats exposed to 250 mg/m3 respirable titanium dust. Analysis of the titanium dioxide concentrations in the rat's lungs showed that the lung clearance mechanism was overwhelmed and that the results at the massive 250 mg/m3 level are not relevant to the workplace.'Results of a DuPont epidemiology study showed that employees who had been exposed to Titanium Dioxide were at no greater risk of developing lung cancer than were employees who had not been exposed to Titanium dioxide. No pulmonary fibrosis was found in any of the employees and no association was observed between Titanium dioxide exposure and chronic respiratory disease or x-ray abnormalities. Based on the results of this study DuPont concludes that titanium dioxide will not cause lung cancer or chronic respiratory disease in humans at concentrations experienced in the workplace.'

Butyl acetate
May cause abnormal liver function. The following medical conditions may be aggravated by exposure: respiratory system. Tests for embryotoxic activity in animals has been inconclusive. Rats exposed to very high airborne levels have exhibited high frequency hearing deficits. The significance of this to man is unknown. Has been toxic to the fetus in laboratory animals at doses that are toxic to the mother.

Polyester resin
Contact may cause skin irritation with discomfort or rash. May cause eye irritation with discomfort, tearing, or blurred vision.

Acetone
The following medical conditions may be aggravated by exposure: lung disease, eye disorders, skin disorders. Overexposure may cause damage to any of the following organs/systems: blood, central nervous system, eyes, kidneys, liver, respiratory system, skin.

Ethyl acetate
Increased susceptibility to the effects of this material may be observed in people with preexisting disease of any of the following: eyes, respiratory system, skin. Tests in laboratory animals have shown effects on any of the following organs/systems: blood, kidneys, liver.

Methyl ethyl ketone
Material is irritating to mucous membranes and upper respiratory tract. Increased susceptibility to the effects of this material may be observed in people with preexisting disease of any of the following: central nervous system, eyes, respiratory system, skin. Prolonged or repeated overexposure may cause any of the following: conjunctivitis, dermatitis. High concentrations have caused embryotoxic effects in laboratory animals. Aspiration may occur during swallowing or vomiting, resulting in lung damage. Ingestion may cause headache, nausea, vomiting, dizziness, and drowsiness.

Note
If a chemical listed above is not identified as a carcinogen, it is not an "IARC, NTP or OSHA carcinogen."

4. First aid measures

General advice
When symptoms persist or in all cases of doubt seek medical advice. Never give anything by mouth to an unconscious person.

Inhalation
Avoid inhalation of vapour or mist. Move to fresh air in case of accidental inhalation of vapours. If breathing is irregular or stopped, administer artificial respiration. If unconscious place in recovery position and seek medical advice. If symptoms persist, call a physician.

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Skin contact
Do NOT use solvents or thinners. Take off all contaminated clothing immediately. Wash skin thoroughly with soap and water or use recognized skin cleanser. If skin irritation persists, call a physician.

Eye contact
Remove contact lenses. Irrigate copiously with clean, fresh water for at least 15 minutes, holding the eyelids apart. Seek medical advice.

Ingestion
In the unlikely event of ingestion, DO NOT INDUCE VOMITING. Call a physician immediately and have names of ingredients available. Keep at rest.

5. Firefighting measures

Suitable extinguishing media
Hazardous combustion products
CO, CO2, smoke, and oxides of any heavy metals that are reported in "Composition, Information on Ingredients" section.

Fire and Explosion Hazards
Combustible liquid. When heated above the flashpoint, emits vapors which, when mixed with air, will burn if an ignition source is present. Fine mist or sprays could ignite at temperatures below the flashpoint.

Special Protective Equipment and Fire Fighting Procedures
Full protective flameproof clothing should be worn as appropriate. Wear self contained breathing apparatus for fire fighting if necessary. In the event of fire, cool tanks with water spray. Do not allow run-off from fire fighting to enter public sewer systems or public waterways.

6. Accidental release measures

Procedures for cleaning up spills or leaks
Ventilate area. If heated above the flashpoint, remove sources of ignition. Prevent skin and eye contact and breathing of vapor. Wear a properly fitted air-purifying respirator with organic vapor cartridges (NIOSH approved TC-23C), eye protection, gloves and protective clothing. Confine, remove with inert absorbent, and dispose of properly.

7. Handling and storage

Safe handling advice
Observe label precautions. Keep away from heat, flame and other sources of ignition. When heated above its flash point, this must be handled as if it were a flammable liquid. Close container after each use. Do not transfer contents to bottles or unlabeled containers. Wash thoroughly after handling and before eating or smoking.
If material is a coating: do not sand, flame cut, braze or weld dry coating without a NIOSH approved air purifying respirator with particulate filters or appropriate ventilation, and gloves. Combustible dust clouds may be created where operations produce fine material (dust). Avoid formation of significant deposits of material as they may become airborne and form combustible dust clouds. Build up of fine material should be cleaned using gentle sweeping or vacuuming in accordance with best practices. Cleaning methods (e.g. compressed air) which can generate potentially combustible dust clouds should not be used.

Advice on protection against fire and explosion
Solvent vapours are heavier than air and may spread along floors. Vapors may form explosive mixtures with air and will burn when an ignition source is present. Always keep in containers of same material as the original one. Never use pressure to empty container: container is not a pressure vessel. The accumulation of contaminated rags may result in spontaneous combustion. Good housekeeping standards and regular safe removal of waste materials will minimize the risks of spontaneous combustion and other fire hazards.

Storage

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Requirements for storage areas and containers
Observe label precautions. Store in a dry, well ventilated place away from sources of heat, ignition and direct sunlight. No smoking. Prevent unauthorized access. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Advice on common storage
Store separately from oxidizing agents and strongly alkaline and strongly acidic materials.

OSHA/NFPA Storage Classification: II

8. Exposure controls/personal protection

Engineering controls and work practices
Provide adequate ventilation. This should be achieved by a good general extraction and -if practically feasible- by the use of a local exhaust ventilation. If these are not sufficient to maintain concentrations of particulates and solvent vapour below the OEL, suitable respiratory protection must be worn.

National occupational exposure limits

CAS-No.	Chemical Name	Source	Time	Type	Value	Note
13463-67-7	Titanium dioxide	OSHA	8 hr	TWA	15 mg/m3	Total Dust
		Dupont	8 & 12 hour	TWA	10 mg/m3	Total Dust
			8 & 12 hour	TWA	5 mg/m3	Respirable Dust
123-86-4	Butyl acetate	ACGIH	15 min	STEL	200 ppm	
			8 hr	TWA	150 ppm	
		OSHA	8 hr	TWA	150 ppm	
110-43-0	Methyl amyl ketone	ACGIH	8 hr	TWA	50 ppm	
		OSHA	8 hr	TWA	100 ppm	
67-64-1	Acetone	ACGIH	15 min	STEL	750 ppm	
			8 hr	TWA	500 ppm	
		OSHA	8 hr	TWA	1,000 ppm	
		Dupont	8 & 12 hour	TWA	500 ppm	
21645-51-2	Aluminum hydroxide	ACGIH	8 hr	TWA	1 mg/m3	
7631-86-9	Amorphous silica	ACGIH	8 hr	TWA	3 mg/m3	Respirable Dust
		OSHA	8 hr	TWA	20 mppcf	
		Dupont	8 hr	PEL	3 mg/m3	
			8 hr	TWA	6 mg/m3	
141-78-6	Ethyl acetate	ACGIH	8 hr	TWA	400 ppm	
		OSHA	8 hr	TWA	400 ppm	

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CAS-No.	Chemical Name	Source	Time	Type	Value	Note
78-93-3	Methyl ethyl ketone	ACGIH	15 min	STEL	300 ppm	
			8 hr	TWA	200 ppm	
		OSHA	8 hr	TWA	200 ppm	
		Dupont	15 min	TWA	300 ppm	
			8 & 12 hour	TWA	200 ppm	

** TWA = Time-weighted average.
STEL = Short term exposure limit.
PEL = Permissible Exposure Limit.

Protective equipment
Personal protective equipment should be worn to prevent contact with eyes, skin or clothing.

Respiratory protection
Do not breathe vapors or mists. Wear an appropriate, properly fitted NIOSH approved respirator during application and until all vapors and spray mists are exhausted unless air monitoring demonstrates vapor/mist levels are below applicable limits. If respirators are required, use a properly fitted air-purifying respirator with organic vapor cartridges (NIOSH approved TC-23C) and particulate filter (NIOSH TC-84A). In confined spaces, or in situations where continuous spray operations are typical, or if proper air-purifying respirator fit is not possible, wear a positive pressure, supplied-air respirator (NIOSH TC-19C). In all cases, follow respirator manufacturer's directions for respirator use.'

Eye protection
Desirable in all industrial situations. Goggles are preferred to prevent eye irritation. If safety glasses are substituted, include splash guard or side shields.

Skin and body protection
Neoprene gloves and coveralls are recommended.

Hygiene measures
Wash skin thoroughly with soap and water or use recognized skin cleanser. Do NOT use solvents or thinners.

Environmental exposure controls
Do not let product enter drains. For ecological information, refer to Ecological Information Section 12.

9. Physical and chemical properties

Appearance

Form: liquid Colour:

Flash point	104 °F
Ignition temperature	377 °C
Lower Explosive Limit	1.1 %
Upper Explosive Limit	10.3 %
Evapouration rate	Slower than Ether
Vapor pressure of principal solvent	20.9 hPa
Water solubility	moderate
Vapor density of principal solvent (Air = 1)	4
Approx. Boiling Range	152 °C

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Approx. Freezing Range	Not applicable.
Gallon Weight (lbs/gal)	10.92
Specific Gravity	1.31
Percent Volatile By Volume	55.13%
Percent Volatile By Weight	35.82%
Percent Solids By Volume	44.87%
Percent Solids By Weight	64.18%
pH (waterborne systems only)	Not applicable.
VOC* less exempt (lbs/gal)	3.7
VOC* as packaged (lbs/gal)	3.4

* VOC less exempt (theoretical) and VOC as packaged (theoretical) are based upon the VOC of the packaged material at the point of manufacture.

10. Stability and reactivity

Stability
Stable

Conditions to avoid
Stable under recommended storage conditions.

Materials to avoid
None reasonably foreseeable.

Hazardous decomposition products
When exposed to high temperatures may produce hazardous decomposition products such as carbon monoxide and dioxide, smoke, oxides of nitrogen.

Hazardous Polymerization
Will not occur.

Sensitivity to Static Discharge
If heated above the flash point, solvent vapors in air may explode if static grounding and bonding is not used during transfer of this product.

Sensitivity to Mechanical Impact
None known.

11. Toxicological information

No data available on the product. See Hazards Identification Section 3 for health effects of the product components.

12. Ecological information

There are no data available on the product itself. The product should not be allowed to enter drains or watercourses. The product contains an organic linked halogen. It may contribute to the AOX-value.

13. Disposal considerations

Waste Disposal Method
Do not allow material to contaminate ground water systems. Incinerate or otherwise dispose of waste material in accordance with Federal, State, Provincial, and local requirements. Do not incinerate in closed containers.

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14. Transport information

No information available.

15. Regulatory information

TSCA Status
In compliance with TSCA Inventory requirements for commercial purposes.

DSL Status
Product is not DSL listed because one or more ingredients are not on the DSL inventory.

WHMIS Classification

- Class B Division 3
- Class D Division 2 Subdivision A 53
- Class D Division 2 Subdivision A 54
- Class D Division 2 Subdivision B 60

WHMIS symbols

Photochemical Reactivity
Non-photochemically reactive

Regulatory information

		EPCRA					CERCLA	CAA
CAS #	Ingredient	302	TPQ	RQ	311 - 312	313	RQ(lbs)	HAP
13463-67-7	Titanium dioxide	N	NR	NR	,A,C,F,N,R	N	NR	N
No information available.	Acrylic polymer	N	NR	NR	NA	N	NR	N
123-86-4	Butyl acetate	N	NR	NR	A,C,F	N	NR	N
110-43-0	Methyl amyl ketone	N	NR	NR	A,C,F	N	NR	N
69153-52-2	Polyester resin	N	NR	NR	NA	N	NR	N
67-64-1	Acetone	N	NR	NR	A,C,F	N	5,000	N
No information available.	Acrylic resin	N	NR	NR	NA	N	NR	N
21645-51-2	Aluminum hydroxide	N	NR	NR	,A,C,F,N,R	N	NR	N
7631-86-9	Amorphous silica	N	NR	NR	,A,C,F,N,R	N	NR	N
763-69-9	Ethyl 3-ethoxy propionate	N	NR	NR	NA	N	NR	N
141-78-6	Ethyl acetate	N	NR	NR	C,F	N	NR	N
78-93-3	Methyl ethyl ketone	N	NR	NR	A,C,F	N	5,000	N

Key:

EPCRA	Emergency Planning and Community Right-to-know Act (aka Title III, SARA)
302	Extremely hazardous substances
311/312 Categories	F = Fire Hazard R = Reactivity Hazard P = Pressure Related Hazard A = Acute Hazard C = Chronic Hazard
313 Information	Section 313 Supplier Notification - The chemicals listed above with a 'Y' in the 313 column are subject to reporting requirements of

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	Section 313 of the Emergency Planning and Community Right-to-Know act of 1986 and of 40 CFR 372.
CERCLA	Comprehensive Emergency Response, Compensation and Liability Act of 1980.
HAP	Listed as a Clean Air Act Hazardous Air Pollutant.
TPQ	Threshold Planning Quantity.
RQ	Reportable Quantity
NA	not available
NR	not regulated

16. Other information

HMIS rating H: 2 F: 2 R: 0

Glossary of Terms:

ACGIH	American Conference of Governmental Industrial Hygienists.
IARC	International Agency for Research on Cancer.
NTP	National Toxicology Program.
OEL	Occupational Exposure Limit
OSHA	Occupational Safety and Health Administration.
STEL	Short term exposure limit.
TWA	Time-weighted average.
PNOR	Particles not otherwise regulated.
PNOC	Particles not otherwise classified.

NOTE: The list (above) of glossary terms may be modified.

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SDS prepared by:
Axalta Coating Systems Regulatory Affairs
Report version

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MMRX-02476

1. Identification of the substance/mixture and of the company/undertaking

Product name	COLOR ATLAS BLUE	
Product code	CAS525 EW	
Intended use	Coating for professional use	
	Axalta Coating Systems, LLC Applied Corporate Center 50 Applied Card Way, Suite 300 US Glen Mills, PA 19342	
Telephone	Product information Medical emergency Transportation emergency	(855) 6-AXALTA (855) 274-5698 (800) 424-9300 (CHEMTREC)

2. Hazards identification

This preparation is hazardous per the following GHS criteria

GHS-Classification

Flammable liquids	Category 3
Serious eye damage/eye irritation	Category 2A

Endpoints which are ""not classified"", ""cannot classified"" and ""not applicable"" are not shown

GHS-Labelling

Hazard symbols	
Signal word	Warning
Hazard statements	Flammable liquid and vapour. Causes serious eye irritation.
Precautionary statements	Wear eye protection/ face protection. Ground/bond container and receiving equipment. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Keep container tightly closed. Take precautionary measures against static discharge. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Wear protective gloves/ eye protection/ face protection. If eye irritation persists: Get medical advice/ attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower. Store in a well-ventilated place. Keep cool. Dispose of contents/container in accordance with local regulations.

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Other hazards which do not result in classification
None known.

The following percentage of the mixture consists of ingredient(s) with unknown acute toxicity:
7.8 %

3. Composition/information on ingredients

Mixture of synthetic resins, pigments, and solvents

Components

CAS-No.	Chemical Name	Concentration	GHS Hazardous
No information available.	Acrylic polymer	20 - 30%	
13463-67-7	Titanium dioxide	19.2%	
69153-52-2	Polyester resin	10 - 20%	
67-64-1	Acetone	4 - 15%	√
123-86-4	Butyl acetate	4 - 15%	√
110-43-0	Methyl amyl ketone	4 - 15%	√
No information available.	Acrylic resin	1 - 5%	
7631-86-9	Amorphous silica	1 - 5%	
763-69-9	Ethyl 3-ethoxy propionate	1 - 4%	√
141-78-6	Ethyl acetate	1 - 4%	√
67-63-0	Isopropyl alcohol	1 - 4%	√
78-93-3	Methyl ethyl ketone	1 - 4%	√
147-14-8	Phthalocyanine blue pigment	1 - 5%	

OSHA Hazardous: Yes
* Assigned CAS No. - An official CAS No. does not exist. The CAS No. shown is for a similar chemical.

4. First aid measures

Eye contact
Remove contact lenses. Irrigate copiously with clean, fresh water for at least 15 minutes, holding the eyelids apart. Seek medical advice.

Skin contact
Do NOT use solvents or thinners. Take off all contaminated clothing immediately. Wash skin thoroughly with soap and water or use recognized skin cleanser. If skin irritation persists, call a physician.

Inhalation
Avoid inhalation of vapour or mist. Move to fresh air in case of accidental inhalation of vapours. If breathing is irregular or stopped, administer artificial respiration. If unconscious place in recovery position and seek medical advice. If symptoms persist, call a physician.

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Ingestion
If swallowed, seek medical advice immediately and show this container or label. Do NOT induce vomiting. Keep at rest.

Most Important Symptoms/effects, acute and delayed

Inhalation
Ingestion
May result in gastrointestinal distress.

Skin or eye contact
May cause irritation or burning of the eyes. Repeated or prolonged liquid contact may cause skin irritation with discomfort and dermatitis.

Indication of immediate medical attention and special treatment needed if necessary
No data available on the product. See section 3 and 11 for hazardous ingredients found in the product.

5. Firefighting measures

Suitable extinguishing media
Extinguishing media which shall not be used for safety reasons
High volume water jet

Hazardous combustion products
CO, CO2, smoke, and oxides of any heavy metals that are reported in "Composition, Information on Ingredients" section.

Fire and Explosion Hazards
Combustible liquid. When heated above the flashpoint, emits vapors which, when mixed with air, will burn if an ignition source is present. Fine mist or sprays could ignite at temperatures below the flashpoint.

Special Protective Equipment and Fire Fighting Procedures
Full protective flameproof clothing should be worn as appropriate. Wear self contained breathing apparatus for fire fighting if necessary. In the event of fire, cool tanks with water spray. Do not allow run-off from fire fighting to enter public sewer systems or public waterways.

6. Accidental release measures

Procedures for cleaning up spills or leaks
Ventilate area. If heated above the flashpoint, remove sources of ignition. Prevent skin and eye contact and breathing of vapor. Wear a properly fitted air-purifying respirator with organic vapor cartridges (NIOSH approved TC-23C), eye protection, gloves and protective clothing. Confine, remove with inert absorbent, and dispose of properly.

Environmental precautions
Do not let product enter drains. Notify the respective authorities in accordance with local law in the case of contamination of rivers, lakes or waste water systems.

7. Handling and storage

Precautions for safe handling
Observe label precautions. Keep away from heat, flame and other sources of ignition. When heated above its flash point, this must be handled as if it were a flammable liquid. Close container after each use. Do not transfer contents to bottles or unlabeled containers. Wash thoroughly after handling and before eating or smoking.
If material is a coating: do not sand, flame cut, braze or weld dry coating without a NIOSH approved air purifying respirator with particulate filters or appropriate ventilation, and gloves. Combustible dust clouds may be created where operations produce fine material (dust). Avoid formation of significant deposits of material as they may become airborne and form combustible dust clouds. Build up of fine material should be cleaned using gentle sweeping or vacuuming in accordance with best practices. Cleaning methods (e.g. compressed air) which can generate potentially combustible dust clouds should not be used.

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Advice on protection against fire and explosion
Solvent vapours are heavier than air and may spread along floors. Vapors may form explosive mixtures with air and will burn when an ignition source is present. Always keep in containers of same material as the original one. Never use pressure to empty container: container is not a pressure vessel. The accumulation of contaminated rags may result in spontaneous combustion. Good housekeeping standards and regular safe removal of waste materials will minimize the risks of spontaneous combustion and other fire hazards.

Storage
Requirements for storage areas and containers
Observe label precautions. Store in a dry, well ventilated place away from sources of heat, ignition and direct sunlight. No smoking. Prevent unauthorized access. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Advice on common storage
Store separately from oxidizing agents and strongly alkaline and strongly acidic materials.

OSHA/NFPA Storage Classification: II

8. Exposure controls/personal protection

Engineering controls and work practices
Provide adequate ventilation. This should be achieved by a good general extraction and -if practically feasible- by the use of a local exhaust ventilation. If these are not sufficient to maintain concentrations of particulates and solvent vapour below the OEL, suitable respiratory protection must be worn.

National occupational exposure limits

CAS-No.	Chemical Name	Source	Time	Type	Value	Note
13463-67-7	Titanium dioxide	OSHA	8 hr	TWA	15 mg/m3	Total Dust
		Dupont	8 & 12 hour	TWA	10 mg/m3	Total Dust
			8 & 12 hour	TWA	5 mg/m3	Respirable Dust
67-64-1	Acetone	ACGIH	15 min	STEL	750 ppm	
			8 hr	TWA	500 ppm	
		OSHA	8 hr	TWA	1,000 ppm	
		Dupont	8 & 12 hour	TWA	500 ppm	
123-86-4	Butyl acetate	ACGIH	15 min	STEL	200 ppm	
			8 hr	TWA	150 ppm	
		OSHA	8 hr	TWA	150 ppm	
110-43-0	Methyl amyl ketone	ACGIH	8 hr	TWA	50 ppm	
		OSHA	8 hr	TWA	100 ppm	
7631-86-9	Amorphous silica	ACGIH	8 hr	TWA	3 mg/m3	Respirable Dust
		OSHA	8 hr	TWA	20 mppcf	
		Dupont	8 hr	PEL	3 mg/m3	

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CAS-No.	Chemical Name	Source	Time	Type	Value	Note
			8 hr	TWA	6 mg/m3	
141-78-6	Ethyl acetate	ACGIH	8 hr	TWA	400 ppm	
		OSHA	8 hr	TWA	400 ppm	
78-93-3	Methyl ethyl ketone	ACGIH	15 min	STEL	300 ppm	
			8 hr	TWA	200 ppm	
		OSHA	8 hr	TWA	200 ppm	
		Dupont	15 min	TWA	300 ppm	
			8 & 12 hour	TWA	200 ppm	
147-14-8	Phthalocyanine blue pigment	ACGIH	8 hr	TWA	10 mg/m3	inhalable dust PNOC
			8 hr	TWA	3 mg/m3	respirable particulate PNOC
		OSHA		TWA	5 mg/m3	Respirable Dust PNOR
			8 hr	TWA	15 mg/m3	Total Dust PNOR

** TWA = Time-weighted average.
STEL = Short term exposure limit.
PEL = Permissible Exposure Limit.

Protective equipment
Personal protective equipment should be worn to prevent contact with eyes, skin or clothing.

Respiratory protection
Do not breathe vapors or mists. Wear an appropriate, properly fitted NIOSH approved respirator during application and until all vapors and spray mists are exhausted unless air monitoring demonstrates vapor/mist levels are below applicable limits. If respirators are required, use a properly fitted air-purifying respirator with organic vapor cartridges (NIOSH approved TC-23C) and particulate filter (NIOSH TC-84A). In confined spaces, or in situations where continuous spray operations are typical, or if proper air-purifying respirator fit is not possible, wear a positive pressure, supplied-air respirator (NIOSH TC-19C). In all cases, follow respirator manufacturer's directions for respirator use.

Eye protection
Desirable in all industrial situations. Goggles are preferred to prevent eye irritation. If safety glasses are substituted, include splash guard or side shields.

Skin and body protection
Neoprene gloves and coveralls are recommended.

Hygiene measures
Wash skin thoroughly with soap and water or use recognized skin cleanser. Do NOT use solvents or thinners.

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Environmental exposure controls
Do not let product enter drains. For ecological information, refer to Ecological Information Section 12.

9. Physical and chemical properties

Appearance

Form: liquid Colour:

Flash point	104 °F	
Ignition temperature	377 °C	
Lower Explosive Limit	1.1 %	
Upper Explosive Limit	12.8 %	
Evapouration rate	Slower than Ether	
Vapor pressure of principal solvent	27.8 hPa	
Water solubility	appreciable	
Vapor density of principal solvent (Air = 1)	4	
Approx. Boiling Range	152 °C	
Approx. Freezing Range	Not applicable.	
Gallon Weight (lbs/gal)	9.54	
Specific Gravity	1.14	
Percent Volatile By Volume	56.42%	
Percent Volatile By Weight	41.66%	
Percent Solids By Volume	43.58%	
Percent Solids By Weight	58.34%	
pH (waterborne systems only)	Not applicable.	
Partition coefficient: n-octanol/water	no data available	
Ignition temperature	377 °C	DIN 51794
Decomposition temperature		
Viscosity (23 °C)	Not applicable.	ISO 2431-1993
VOC* less exempt (lbs/gal)	3.7	
VOC* as packaged (lbs/gal)	3.3	

* VOC less exempt (theoretical) and VOC as packaged (theoretical) are based upon the VOC of the packaged material at the point of manufacture.

10. Stability and reactivity

Stability
Stable

Conditions to avoid
Stable under recommended storage conditions.

Materials to avoid
None reasonably foreseeable.

Hazardous decomposition products
When exposed to high temperatures may produce hazardous decomposition products such as carbon monoxide and dioxide, smoke, oxides of nitrogen.

Hazardous Polymerization
Will not occur.

Sensitivity to Static Discharge
If heated above the flash point, solvent vapors in air may explode if static grounding and bonding is not used during transfer of this product.

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Sensitivity to Mechanical Impact
None known.

11. Toxicological information

Information on likely routes of exposure

Inhalation
Ingestion
May result in gastrointestinal distress.

Skin or eye contact
May cause irritation or burning of the eyes. Repeated or prolonged liquid contact may cause skin irritation with discomfort and dermatitis.

Delayed and immediate effects and also chronic effects from short and long term exposure:

Acute oral toxicity
not hazardous

Acute dermal toxicity
not hazardous

Acute inhalation toxicity
not hazardous

% of unknown composition 7.8 %

Skin corrosion/irritation
Not classified according to GHS criteria

Serious eye damage/eye irritation

acetone	Category 2A
heptan-2-one	Category 2B
ethyl acetate	Category 2A
propan-2-ol	Category 2A
butanone	Category 2A

Respiratory sensitisation
Not classified according to GHS criteria

Skin sensitisation
Not classified according to GHS criteria

Germ cell mutagenicity
Not classified according to GHS criteria

Carcinogenicity
Not classified according to GHS criteria

Toxicity for reproduction
Not classified according to GHS criteria

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Target Organ Systemic Toxicant - Single exposure
Not classified according to GHS criteria

Target Organ Systemic Toxicant - Repeated exposure
Not classified according to GHS criteria

Aspiration toxicity
Not classified according to GHS criteria

Numerical measures of toxicity (acute toxicity estimation (ATE),etc.)
No information available.

Symptoms related to the physical, chemical and toxicological characteristics
Exposure to component solvents vapours concentration in excess of the stated occupational exposure limit may result in adverse health effect such as mucous membrane and respiratory system irritation and adverse effect on kidney, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness. Through skin resorbtion, solvents can cause some of the effects described here. Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin resulting in non-allergic contact dermatitis and absorption through the skin. The liquid splashed in the eyes may cause irritation and reversible damage.

Whether the hazardous chemical is listed by NTP, IARC or OSHA

Titanium dioxide	IARC 2B

12. Ecological information

There are no data available on the product itself. The product should not be allowed to enter drains or watercourses. The product contains an organic linked halogen. It may contribute to the AOX-value.

13. Disposal considerations

Waste Disposal Method
Do not allow material to contaminate ground water systems. Incinerate or otherwise dispose of waste material in accordance with Federal, State, Provincial, and local requirements. Do not incinerate in closed containers.

14. Transport information

International transport regulations

IMDG (Sea transport)

UN number:	1263
Proper shipping name:	PAINT
Hazard Class:	3
Subsidiary Hazard Class:	Not applicable.
Packing group:	III
Marine Pollutant:	no

ICAO/IATA (Air transport)

UN number:	1263
Proper shipping name:	PAINT
Hazard Class:	3
Subsidiary Hazard Class:	Not applicable.
Packing group:	III

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DOT

UN number:	1263
Proper shipping name:	PAINT
Hazard Class:	3
Subsidiary Hazard Class:	Not applicable.
Packing group:	III
Marine Pollutant:	no
EmS:	F-E,S-E

Matters needing attention for transportation
Confirm that there is no breakage, corrosion, or leakage from the container before shipping. Be sure to prevent damage to cargo by loading so as to avoid falling, dropping, or collapse. Ship in appropriate containers with denotation of the content in accordance with the relevant statutes and rules.

15. Regulatory information

TSCA Status
In compliance with TSCA Inventory requirements for commercial purposes.

DSL Status
Product is not DSL listed because one or more ingredients are not on the DSL inventory.

Photochemical Reactivity
Non-photochemically reactive

Regulatory information

		EPCRA					CERCLA	CAA
CAS #	Ingredient	302	TPQ	RQ	311 - 312	313	RQ(lbs)	HAP
No information available.	Acrylic polymer	N	NR	NR	NA	N	NR	N
13463-67-7	Titanium dioxide	N	NR	NR	,A,C,F,N,R	N	NR	N
69153-52-2	Polyester resin	N	NR	NR	NA	N	NR	N
67-64-1	Acetone	N	NR	NR	A,C,F	N	5,000	N
123-86-4	Butyl acetate	N	NR	NR	A,C,F	N	NR	N
110-43-0	Methyl amyl ketone	N	NR	NR	A,C,F	N	NR	N
No information available.	Acrylic resin	N	NR	NR	NA	N	NR	N
7631-86-9	Amorphous silica	N	NR	NR	,A,C,F,N,R	N	NR	N
763-69-9	Ethyl 3-ethoxy propionate	N	NR	NR	NA	N	NR	N
141-78-6	Ethyl acetate	N	NR	NR	C,F	N	NR	N
67-63-0	Isopropyl alcohol	N	NR	NR	,A,C,F,N,R	N	NR	N
78-93-3	Methyl ethyl ketone	N	NR	NR	A,C,F	N	5,000	N
147-14-8	Phthalocyanine blue pigment	N	NR	NR	,A,C,F,N,R	N	NR	N

Key:

EPCRA	Emergency Planning and Community Right-to-know Act (aka Title III, SARA)
302	Extremely hazardous substances
311/312 Categories	F = Fire Hazard R = Reactivity Hazard P = Pressure Related Hazard A = Acute Hazard C = Chronic Hazard
313 Information	Section 313 Supplier Notification - The chemicals listed above with a 'Y' in the 313 column are subject to reporting requirements of Section 313 of the Emergency Planning and Community

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	Right-to-Know act of 1986 and of 40 CFR 372.
CERCLA	Comprehensive Emergency Response, Compensation and Liability Act of 1980.
HAP	Listed as a Clean Air Act Hazardous Air Pollutant.
TPQ	Threshold Planning Quantity.
RQ	Reportable Quantity
NA	not available
NR	not regulated

16. Other information

HMIS rating H: 2 F: 2 R: 0

Glossary of Terms:

ACGIH	American Conference of Governmental Industrial Hygienists.
IARC	International Agency for Research on Cancer.
NTP	National Toxicology Program.
OEL	Occupational Exposure Limit
OSHA	Occupational Safety and Health Administration.
STEL	Short term exposure limit.
TWA	Time-weighted average.
PNOR	Particles not otherwise regulated.
PNOC	Particles not otherwise classified.

NOTE: The list (above) of glossary terms may be modified.

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MMRX-02470

1. Identification of the substance/mixture and of the company/undertaking

Product name	COLOR ATLAS BLUE	
Product code	CAS667 EW	
Intended use	Coating for professional use	
	Axalta Coating Systems, LLC Applied Corporate Center 50 Applied Card Way, Suite 300 US Glen Mills, PA 19342	
Telephone	Product information Medical emergency Transportation emergency	(855) 6-AXALTA (855) 274-5698 (800) 424-9300 (CHEMTREC)

2. Hazards identification

This preparation is hazardous per the following GHS criteria

GHS-Classification

Flammable liquids	Category 3
Serious eye damage/eye irritation	Category 2A

Endpoints which are ""not classified"", ""cannot classified"" and ""not applicable"" are not shown

GHS-Labelling

Hazard symbols	
Signal word	Warning
Hazard statements	Flammable liquid and vapour. Causes serious eye irritation.
Precautionary statements	Wear eye protection/ face protection. Ground/bond container and receiving equipment. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Keep container tightly closed. Take precautionary measures against static discharge. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Wear protective gloves/ eye protection/ face protection. If eye irritation persists: Get medical advice/ attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower. Store in a well-ventilated place. Keep cool. Dispose of contents/container in accordance with local regulations.

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Other hazards which do not result in classification
None known.

The following percentage of the mixture consists of ingredient(s) with unknown acute toxicity:
8.1 %

3. Composition/information on ingredients

Mixture of synthetic resins, pigments, and solvents

Components

CAS-No.	Chemical Name	Concentration	GHS Hazardous
13463-67-7	Titanium dioxide	32.6%	
No information available.	Acrylic polymer	10 - 20%	
69153-52-2	Polyester resin	5 - 10%	
67-64-1	Acetone	4 - 15%	√
123-86-4	Butyl acetate	4 - 15%	√
110-43-0	Methyl amyl ketone	4 - 15%	√
No information available.	Acrylic resin	1 - 5%	
21645-51-2	Aluminum hydroxide	1 - 5%	
7631-86-9	Amorphous silica	1 - 5%	
763-69-9	Ethyl 3-ethoxy propionate	1 - 4%	√
141-78-6	Ethyl acetate	1 - 4%	√
78-93-3	Methyl ethyl ketone	1 - 4%	√

OSHA Hazardous: Yes
* Assigned CAS No. - An official CAS No. does not exist. The CAS No. shown is for a similar chemical.

4. First aid measures

Eye contact
Remove contact lenses. Irrigate copiously with clean, fresh water for at least 15 minutes, holding the eyelids apart. Seek medical advice.

Skin contact
Do NOT use solvents or thinners. Take off all contaminated clothing immediately. Wash skin thoroughly with soap and water or use recognized skin cleanser. If skin irritation persists, call a physician.

Inhalation
Avoid inhalation of vapour or mist. Move to fresh air in case of accidental inhalation of vapours. If breathing is irregular or stopped, administer artificial respiration. If unconscious place in recovery position and seek medical advice. If symptoms persist, call a physician.

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Ingestion
If swallowed, seek medical advice immediately and show this container or label. Do NOT induce vomiting. Keep at rest.

Most Important Symptoms/effects, acute and delayed

Inhalation
Ingestion
May result in gastrointestinal distress.

Skin or eye contact
May cause irritation or burning of the eyes. Repeated or prolonged liquid contact may cause skin irritation with discomfort and dermatitis.

Indication of immediate medical attention and special treatment needed if necessary
No data available on the product. See section 3 and 11 for hazardous ingredients found in the product.

5. Firefighting measures

Suitable extinguishing media
Extinguishing media which shall not be used for safety reasons
High volume water jet

Hazardous combustion products
CO, CO2, smoke, and oxides of any heavy metals that are reported in "Composition, Information on Ingredients" section.

Fire and Explosion Hazards
Combustible liquid. When heated above the flashpoint, emits vapors which, when mixed with air, will burn if an ignition source is present. Fine mist or sprays could ignite at temperatures below the flashpoint.

Special Protective Equipment and Fire Fighting Procedures
Full protective flameproof clothing should be worn as appropriate. Wear self contained breathing apparatus for fire fighting if necessary. In the event of fire, cool tanks with water spray. Do not allow run-off from fire fighting to enter public sewer systems or public waterways.

6. Accidental release measures

Procedures for cleaning up spills or leaks
Ventilate area. If heated above the flashpoint, remove sources of ignition. Prevent skin and eye contact and breathing of vapor. Wear a properly fitted air-purifying respirator with organic vapor cartridges (NIOSH approved TC-23C), eye protection, gloves and protective clothing. Confine, remove with inert absorbent, and dispose of properly.

Environmental precautions
Do not let product enter drains. Notify the respective authorities in accordance with local law in the case of contamination of rivers, lakes or waste water systems.

7. Handling and storage

Precautions for safe handling
Observe label precautions. Keep away from heat, flame and other sources of ignition. When heated above its flash point, this must be handled as if it were a flammable liquid. Close container after each use. Do not transfer contents to bottles or unlabeled containers. Wash thoroughly after handling and before eating or smoking.
If material is a coating: do not sand, flame cut, braze or weld dry coating without a NIOSH approved air purifying respirator with particulate filters or appropriate ventilation, and gloves. Combustible dust clouds may be created where operations produce fine material (dust). Avoid formation of significant deposits of material as they may become airborne and form combustible dust clouds. Build up of fine material should be cleaned using gentle sweeping or vacuuming in accordance with best practices. Cleaning methods (e.g. compressed air) which can generate potentially combustible dust clouds should not be used.

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MMRX-02471

Advice on protection against fire and explosion
Solvent vapours are heavier than air and may spread along floors. Vapors may form explosive mixtures with air and will burn when an ignition source is present. Always keep in containers of same material as the original one. Never use pressure to empty container: container is not a pressure vessel. The accumulation of contaminated rags may result in spontaneous combustion. Good housekeeping standards and regular safe removal of waste materials will minimize the risks of spontaneous combustion and other fire hazards.

Storage
Requirements for storage areas and containers
Observe label precautions. Store in a dry, well ventilated place away from sources of heat, ignition and direct sunlight. No smoking. Prevent unauthorized access. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Advice on common storage
Store separately from oxidizing agents and strongly alkaline and strongly acidic materials.

OSHA/NFPA Storage Classification: II

8. Exposure controls/personal protection

Engineering controls and work practices
Provide adequate ventilation. This should be achieved by a good general extraction and -if practically feasible- by the use of a local exhaust ventilation. If these are not sufficient to maintain concentrations of particulates and solvent vapour below the OEL, suitable respiratory protection must be worn.

National occupational exposure limits

CAS-No.	Chemical Name	Source	Time	Type	Value	Note
13463-67-7	Titanium dioxide	OSHA	8 hr	TWA	15 mg/m3	Total Dust
		Dupont	8 & 12 hour	TWA	10 mg/m3	Total Dust
			8 & 12 hour	TWA	5 mg/m3	Respirable Dust
67-64-1	Acetone	ACGIH	15 min	STEL	750 ppm	
			8 hr	TWA	500 ppm	
		OSHA	8 hr	TWA	1,000 ppm	
		Dupont	8 & 12 hour	TWA	500 ppm	
123-86-4	Butyl acetate	ACGIH	15 min	STEL	200 ppm	
			8 hr	TWA	150 ppm	
		OSHA	8 hr	TWA	150 ppm	
110-43-0	Methyl amyl ketone	ACGIH	8 hr	TWA	50 ppm	
		OSHA	8 hr	TWA	100 ppm	
21645-51-2	Aluminum hydroxide	ACGIH	8 hr	TWA	1 mg/m3	
7631-86-9	Amorphous silica	ACGIH	8 hr	TWA	3 mg/m3	Respirable Dust
		OSHA	8 hr	TWA	20 mppcf	

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CAS-No.	Chemical Name	Source	Time	Type	Value	Note
		Dupont	8 hr	PEL	3 mg/m3	
			8 hr	TWA	6 mg/m3	
141-78-6	Ethyl acetate	ACGIH	8 hr	TWA	400 ppm	
		OSHA	8 hr	TWA	400 ppm	
78-93-3	Methyl ethyl ketone	ACGIH	15 min	STEL	300 ppm	
			8 hr	TWA	200 ppm	
		OSHA	8 hr	TWA	200 ppm	
		Dupont	15 min	TWA	300 ppm	
			8 & 12 hour	TWA	200 ppm	

** TWA = Time-weighted average.
STEL = Short term exposure limit.
PEL = Permissible Exposure Limit.

Protective equipment
Personal protective equipment should be worn to prevent contact with eyes, skin or clothing.

Respiratory protection
Do not breathe vapors or mists. Wear an appropriate, properly fitted NIOSH approved respirator during application and until all vapors and spray mists are exhausted unless air monitoring demonstrates vapor/mist levels are below applicable limits. If respirators are required, use a properly fitted air-purifying respirator with organic vapor cartridges (NIOSH approved TC-23C) and particulate filter (NIOSH TC-84A). In confined spaces, or in situations where continuous spray operations are typical, or if proper air-purifying respirator fit is not possible, wear a positive pressure, supplied-air respirator (NIOSH TC-19C). In all cases, follow respirator manufacturer's directions for respirator use.'

Eye protection
Desirable in all industrial situations. Goggles are preferred to prevent eye irritation. If safety glasses are substituted, include splash guard or side shields.

Skin and body protection
Neoprene gloves and coveralls are recommended.

Hygiene measures
Wash skin thoroughly with soap and water or use recognized skin cleanser. Do NOT use solvents or thinners.

Environmental exposure controls
Do not let product enter drains. For ecological information, refer to Ecological Information Section 12.

9. Physical and chemical properties

Appearance

Form: liquid Colour:

Flash point	104 °F

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Ignition temperature	377 °C	
Lower Explosive Limit	1.1 %	
Upper Explosive Limit	10.3 %	
Evapouration rate	Slower than Ether	
Vapor pressure of principal solvent	21.2 hPa	
Water solubility	moderate	
Vapor density of principal solvent (Air = 1)	4	
Approx. Boiling Range	152 °C	
Approx. Freezing Range	Not applicable.	
Gallon Weight (lbs/gal)	10.88	
Specific Gravity	1.30	
Percent Volatile By Volume	55.24%	
Percent Volatile By Weight	36.01%	
Percent Solids By Volume	44.76%	
Percent Solids By Weight	63.99%	
pH (waterborne systems only)	Not applicable.	
Partition coefficient: n-octanol/water	no data available	
Ignition temperature	377 °C	DIN 51794
Decomposition temperature		
Viscosity (23 °C)	Not applicable.	ISO 2431-1993
VOC* less exempt (lbs/gal)	3.7	
VOC* as packaged (lbs/gal)	3.4	

* VOC less exempt (theoretical) and VOC as packaged (theoretical) are based upon the VOC of the packaged material at the point of manufacture.

10. Stability and reactivity

Stability
Stable

Conditions to avoid
Stable under recommended storage conditions.

Materials to avoid
None reasonably foreseeable.

Hazardous decomposition products
When exposed to high temperatures may produce hazardous decomposition products such as carbon monoxide and dioxide, smoke, oxides of nitrogen.

Hazardous Polymerization
Will not occur.

Sensitivity to Static Discharge
If heated above the flash point, solvent vapors in air may explode if static grounding and bonding is not used during transfer of this product.

Sensitivity to Mechanical Impact
None known.

11. Toxicological information

Information on likely routes of exposure

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Inhalation
Ingestion
May result in gastrointestinal distress.

Skin or eye contact
May cause irritation or burning of the eyes. Repeated or prolonged liquid contact may cause skin irritation with discomfort and dermatitis.

Delayed and immediate effects and also chronic effects from short and long term exposure:

Acute oral toxicity
not hazardous

Acute dermal toxicity
not hazardous

Acute inhalation toxicity
not hazardous

% of unknown composition 8.1 %

Skin corrosion/irritation
Not classified according to GHS criteria

Serious eye damage/eye irritation

acetone	Category 2A
heptan-2-one	Category 2B
ethyl acetate	Category 2A
butanone	Category 2A

Respiratory sensitisation
Not classified according to GHS criteria

Skin sensitisation
Not classified according to GHS criteria

Germ cell mutagenicity
Not classified according to GHS criteria

Carcinogenicity
Not classified according to GHS criteria

Toxicity for reproduction
Not classified according to GHS criteria

Target Organ Systemic Toxicant - Single exposure
Not classified according to GHS criteria

Target Organ Systemic Toxicant - Repeated exposure
Not classified according to GHS criteria

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Aspiration toxicity
Not classified according to GHS criteria

Numerical measures of toxicity (acute toxicity estimation (ATE),etc.)
No information available.

Symptoms related to the physical, chemical and toxicological characteristics
Exposure to component solvents vapours concentration in excess of the stated occupational exposure limit may result in adverse health effect such as mucous membrane and respiratory system irritation and adverse effect on kidney, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness. Through skin resorbtion, solvents can cause some of the effects described here. Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin resulting in non-allergic contact dermatitis and absorption through the skin. The liquid splashed in the eyes may cause irritation and reversible damage.

Whether the hazardous chemical is listed by NTP, IARC or OSHA

Titanium dioxide	IARC 2B

12. Ecological information

There are no data available on the product itself. The product should not be allowed to enter drains or watercourses. The product contains an organic linked halogen. It may contribute to the AOX-value.

13. Disposal considerations

Waste Disposal Method
Do not allow material to contaminate ground water systems. Incinerate or otherwise dispose of waste material in accordance with Federal, State, Provincial, and local requirements. Do not incinerate in closed containers.

14. Transport information

International transport regulations

IMDG (Sea transport)	
UN number:	1263
Proper shipping name:	PAINT
Hazard Class:	3
Subsidiary Hazard Class:	Not applicable.
Packing group:	III
Marine Pollutant:	no
ICAO/IATA (Air transport)	
UN number:	1263
Proper shipping name:	PAINT
Hazard Class:	3
Subsidiary Hazard Class:	Not applicable.
Packing group:	III
DOT	
UN number:	1263
Proper shipping name:	PAINT
Hazard Class:	3
Subsidiary Hazard Class:	Not applicable.
Packing group:	III

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Marine Pollutant:	no
EmS:	F-E,S-E

Matters needing attention for transportation
Confirm that there is no breakage, corrosion, or leakage from the container before shipping. Be sure to prevent damage to cargo by loading so as to avoid falling, dropping, or collapse. Ship in appropriate containers with denotation of the content in accordance with the relevant statutes and rules.

15. Regulatory information

TSCA Status
In compliance with TSCA Inventory requirements for commercial purposes.

DSL Status
Product is not DSL listed because one or more ingredients are not on the DSL inventory.

Photochemical Reactivity
Non-photochemically reactive

Regulatory information

		EPCRA					CERCLA	CAA
CAS #	Ingredient	302	TPQ	RQ	311 - 312	313	RQ(lbs)	HAP
13463-67-7	Titanium dioxide	N	NR	NR	,A,C,F,N,R	N	NR	N
No information available.	Acrylic polymer	N	NR	NR	NA	N	NR	N
69153-52-2	Polyester resin	N	NR	NR	NA	N	NR	N
67-64-1	Acetone	N	NR	NR	A,C,F	N	5,000	N
123-86-4	Butyl acetate	N	NR	NR	A,C,F	N	NR	N
110-43-0	Methyl amyl ketone	N	NR	NR	A,C,F	N	NR	N
No information available.	Acrylic resin	N	NR	NR	NA	N	NR	N
21645-51-2	Aluminum hydroxide	N	NR	NR	,A,C,F,N,R	N	NR	N
7631-86-9	Amorphous silica	N	NR	NR	,A,C,F,N,R	N	NR	N
763-69-9	Ethyl 3-ethoxy propionate	N	NR	NR	NA	N	NR	N
141-78-6	Ethyl acetate	N	NR	NR	C,F	N	NR	N
78-93-3	Methyl ethyl ketone	N	NR	NR	A,C,F	N	5,000	N

Key:

EPCRA	Emergency Planning and Community Right-to-know Act (aka Title III, SARA)
302	Extremely hazardous substances
311/312 Categories	F = Fire Hazard R = Reactivity Hazard P = Pressure Related Hazard A = Acute Hazard C = Chronic Hazard
313 Information	Section 313 Supplier Notification - The chemicals listed above with a 'Y' in the 313 column are subject to reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know act of 1986 and of 40 CFR 372.
CERCLA	Comprehensive Emergency Response, Compensation and Liability Act of 1980.
HAP	Listed as a Clean Air Act Hazardous Air Pollutant.
TPQ	Threshold Planning Quantity.
RQ	Reportable Quantity
NA	not available
NR	not regulated

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16. Other information

HMIS rating H: 2 F: 2 R: 0

Glossary of Terms:

ACGIH	American Conference of Governmental Industrial Hygienists.
IARC	International Agency for Research on Cancer.
NTP	National Toxicology Program.
OEL	Occupational Exposure Limit
OSHA	Occupational Safety and Health Administration.
STEL	Short term exposure limit.
TWA	Time-weighted average.
PNOR	Particles not otherwise regulated.
PNOC	Particles not otherwise classified.

NOTE: The list (above) of glossary terms may be modified.

Notice from Axalta Coating Systems
The document reflects information provided to Axalta Coating Systems by its suppliers. Information is accurate to the best of our knowledge and is subject to change as new data is received by Axalta Coating Systems. Persons receiving this information should make their own determination as to its suitability for their purposes prior to use. The information on this Material Safety Data Sheet relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process.
SDS prepared by:
Axalta Coating Systems Regulatory Affairs
Report version

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1. Identification of the substance/mixture and of the company/undertaking

Product name	Color Atlas Neutral	
Product code	CAS505EW	
Intended use	Coating for professional use	
	Axalta Coating Systems, LLC Applied Corporate Center 50 Applied Card Way, Suite 300 US Glen Mills, PA 19342	
Telephone	Product information	(855) 6-AXALTA
	Medical emergency	(855) 274-5698
	Transportation emergency	(800) 424-9300 (CHEMTREC)

2. Hazards identification

This preparation is hazardous per the following GHS criteria

GHS-Classification

Flammable liquids	Category 3
Serious eye damage/eye irritation	Category 2A

Endpoints which are ""not classified"", ""cannot classified"" and ""not applicable"" are not shown

GHS-Labelling

Hazard symbols	
Signal word	Warning
Hazard statements	Flammable liquid and vapour. Causes serious eye irritation.
Precautionary statements	Wear eye protection/ face protection. Ground/bond container and receiving equipment. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Keep container tightly closed. Take precautionary measures against static discharge. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Wear protective gloves/ eye protection/ face protection. If eye irritation persists: Get medical advice/ attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower. Store in a well-ventilated place. Keep cool. Dispose of contents/container in accordance with local regulations.

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Other hazards which do not result in classification
None known.

The following percentage of the mixture consists of ingredient(s) with unknown acute toxicity:
1.6 %

3. Composition/information on ingredients

Mixture of synthetic resins, pigments, and solvents

Components

CAS-No.	Chemical Name	Concentration	GHS Hazardous
No information available.	Acrylic polymer	20 - 30%	
110-43-0	Methyl amyl ketone	15 - 26%	√
69153-52-2	Polyester resin	10 - 20%	
7429-90-5	Aluminum	6%	√
67-64-1	Acetone	4 - 15%	√
123-86-4	Butyl acetate	4 - 15%	√
No information available.	Acrylic resin	1 - 5%	
92797-60-9	Amorphous silica	1 - 5%	
763-69-9	Ethyl 3-ethoxy propionate	1 - 4%	√
141-78-6	Ethyl acetate	1 - 4%	√
64742-48-9	Hydrotreated heavy naphtha (petroleum)	1 - 4%	√
67-63-0	Isopropyl alcohol	1 - 4%	√
78-93-3	Methyl ethyl ketone	1 - 4%	√
8052-41-3	Stoddard solvent	1 - 4%	√
169276-18-0*	Synthetic resin	1 - 5%	
1333-86-4	Carbon black	0.2%	
100-41-4	Ethylbenzene	0.1%	√

OSHA Hazardous: Yes
* Assigned CAS No. - An official CAS No. does not exist. The CAS No. shown is for a similar chemical.

4. First aid measures

Eye contact
Remove contact lenses. Irrigate copiously with clean, fresh water for at least 15 minutes, holding the eyelids apart. Seek medical advice.

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Skin contact
Do NOT use solvents or thinners. Take off all contaminated clothing immediately. Wash skin thoroughly with soap and water or use recognized skin cleanser. If skin irritation persists, call a physician.

Inhalation
Avoid inhalation of vapour or mist. Move to fresh air in case of accidental inhalation of vapours. If breathing is irregular or stopped, administer artificial respiration. If unconscious place in recovery position and seek medical advice. If symptoms persist, call a physician.

Ingestion
If swallowed, seek medical advice immediately and show this container or label. Do NOT induce vomiting. Keep at rest.

Most Important Symptoms/effects, acute and delayed

Inhalation
Ingestion
May result in gastrointestinal distress.

Skin or eye contact
May cause irritation or burning of the eyes. Repeated or prolonged liquid contact may cause skin irritation with discomfort and dermatitis.

Indication of immediate medical attention and special treatment needed if necessary
No data available on the product. See section 3 and 11 for hazardous ingredients found in the product.

5. Firefighting measures

Suitable extinguishing media
Extinguishing media which shall not be used for safety reasons
High volume water jet

Hazardous combustion products
CO, CO2, smoke, and oxides of any heavy metals that are reported in "Composition, Information on Ingredients" section.

Fire and Explosion Hazards
Combustible liquid. When heated above the flashpoint, emits vapors which, when mixed with air, will burn if an ignition source is present. Fine mist or sprays could ignite at temperatures below the flashpoint.

Special Protective Equipment and Fire Fighting Procedures
Full protective flameproof clothing should be worn as appropriate. Wear self contained breathing apparatus for fire fighting if necessary. In the event of fire, cool tanks with water spray. Do not allow run-off from fire fighting to enter public sewer systems or public waterways.

6. Accidental release measures

Procedures for cleaning up spills or leaks
Ventilate area. If heated above the flashpoint, remove sources of ignition. Prevent skin and eye contact and breathing of vapor. Wear a properly fitted air-purifying respirator with organic vapor cartridges (NIOSH approved TC-23C), eye protection, gloves and protective clothing. Confine, remove with inert absorbent, and dispose of properly.

Environmental precautions
Do not let product enter drains. Notify the respective authorities in accordance with local law in the case of contamination of rivers, lakes or waste water systems.

7. Handling and storage

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Precautions for safe handling
Observe label precautions. Keep away from heat, flame and other sources of ignition. When heated above its flash point, this must be handled as if it were a flammable liquid. Close container after each use. Do not transfer contents to bottles or unlabeled containers. Wash thoroughly after handling and before eating or smoking.
If material is a coating: do not sand, flame cut, braze or weld dry coating without a NIOSH approved air purifying respirator with particulate filters or appropriate ventilation, and gloves. Combustible dust clouds may be created where operations produce fine material (dust). Avoid formation of significant deposits of material as they may become airborne and form combustible dust clouds. Build up of fine material should be cleaned using gentle sweeping or vacuuming in accordance with best practices. Cleaning methods (e.g. compressed air) which can generate potentially combustible dust clouds should not be used.

Advice on protection against fire and explosion
Solvent vapours are heavier than air and may spread along floors. Vapors may form explosive mixtures with air and will burn when an ignition source is present. Always keep in containers of same material as the original one. Never use pressure to empty container: container is not a pressure vessel. The accumulation of contaminated rags may result in spontaneous combustion. Good housekeeping standards and regular safe removal of waste materials will minimize the risks of spontaneous combustion and other fire hazards.

Storage
Requirements for storage areas and containers
Observe label precautions. Store in a dry, well ventilated place away from sources of heat, ignition and direct sunlight. No smoking. Prevent unauthorized access. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Advice on common storage
Store separately from oxidizing agents and strongly alkaline and strongly acidic materials.

OSHA/NFPA Storage Classification: II

8. Exposure controls/personal protection

Engineering controls and work practices
Provide adequate ventilation. This should be achieved by a good general extraction and -if practically feasible- by the use of a local exhaust ventilation. If these are not sufficient to maintain concentrations of particulates and solvent vapour below the OEL, suitable respiratory protection must be worn.

National occupational exposure limits

CAS-No.	Chemical Name	Source	Time	Type	Value	Note
110-43-0	Methyl amyl ketone	ACGIH	8 hr	TWA	50 ppm	
		OSHA	8 hr	TWA	100 ppm	
7429-90-5	Aluminum	OSHA	8 hr	TWA	15 mg/m3	Total Dust
			8 hr	TWA	5 mg/m3	Respirable Dust
		Dupont	8 & 12 hour	TWA	0.5 mg/m3	
67-64-1	Acetone	ACGIH	15 min	STEL	750 ppm	
			8 hr	TWA	500 ppm	
		OSHA	8 hr	TWA	1,000 ppm	
		Dupont	8 & 12 hour	TWA	500 ppm	
123-86-4	Butyl acetate	ACGIH	15 min	STEL	200 ppm	

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CAS-No.	Chemical Name	Source	Time	Type	Value	Note
			8 hr	TWA	150 ppm	
		OSHA	8 hr	TWA	150 ppm	
92797-60-9	Amorphous silica	ACGIH	8 hr	TWA	2 mg/m3	Respirable Dust
		OSHA	15 min	STEL	1 mg/m3	
		Dupont	8 hr	TWA	1 mg/m3	
141-78-6	Ethyl acetate	ACGIH	8 hr	TWA	400 ppm	
		OSHA	8 hr	TWA	400 ppm	
64742-48-9	Hydrotreated heavy naphtha (petroleum)	ACGIH	8 hr	TWA	100 ppm	
		OSHA	8 hr	TWA	500 ppm	
		Dupont	8 hr	TWA	100 ppm	
78-93-3	Methyl ethyl ketone	ACGIH	15 min	STEL	300 ppm	
			8 hr	TWA	200 ppm	
		OSHA	8 hr	TWA	200 ppm	
		Dupont	15 min	TWA	300 ppm	
			8 & 12 hour	TWA	200 ppm	
8052-41-3	Stoddard solvent	ACGIH	8 hr	TWA	100 ppm	
		OSHA		TWA	500 ppm	
		Dupont	15 min	STEL	100 ppm	
			8 & 12 hour	TWA	50 ppm	
1333-86-4	Carbon black	ACGIH	8 hr	TWA	3 mg/m3	
		OSHA	8 hr	TWA	3.5 mg/m3	
		Dupont	8 & 12 hour	TWA	0.5 mg/m3	
100-41-4	Ethylbenzene	ACGIH	8 hr	TWA	20 ppm	
		OSHA	8 hr	TWA	100 ppm	
		Dupont	8 & 12 hour	TWA	25 ppm	

** TWA = Time-weighted average.
STEL = Short term exposure limit.

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Protective equipment
Personal protective equipment should be worn to prevent contact with eyes, skin or clothing.

Respiratory protection
Do not breathe vapors or mists. Wear an appropriate, properly fitted NIOSH approved respirator during application and until all vapors and spray mists are exhausted unless air monitoring demonstrates vapor/mist levels are below applicable limits. If respirators are required, use a properly fitted air-purifying respirator with organic vapor cartridges (NIOSH approved TC-23C) and particulate filter (NIOSH TC-84A). In confined spaces, or in situations where continuous spray operations are typical, or if proper air-purifying respirator fit is not possible, wear a positive pressure, supplied-air respirator (NIOSH TC-19C). In all cases, follow respirator manufacturer's directions for respirator use.

Eye protection
Desirable in all industrial situations. Goggles are preferred to prevent eye irritation. If safety glasses are substituted, include splash guard or side shields.

Skin and body protection
Neoprene gloves and coveralls are recommended.

Hygiene measures
Wash skin thoroughly with soap and water or use recognized skin cleanser. Do NOT use solvents or thinners.

Environmental exposure controls
Do not let product enter drains. For ecological information, refer to Ecological Information Section 12.

9. Physical and chemical properties

Appearance

Form: liquid Colour:

Flash point	104 °F	
Ignition temperature	232 °C	
Lower Explosive Limit	1.1 %	
Upper Explosive Limit	12.8 %	
Evapouration rate	Slower than Ether	
Vapor pressure of principal solvent	26.0 hPa	
Water solubility	appreciable	
Vapor density of principal solvent (Air = 1)	3.9	
Approx. Boiling Range	152 °C	
Approx. Freezing Range	Not applicable.	
Gallon Weight (lbs/gal)	8.25	
Specific Gravity	0.99	
Percent Volatile By Volume	56.68%	
Percent Volatile By Weight	47.55%	
Percent Solids By Volume	43.32%	
Percent Solids By Weight	52.45%	
pH (waterborne systems only)	Not applicable.	
Partition coefficient: n-octanol/water	no data available	
Ignition temperature	232 °C	DIN 51794
Decomposition temperature		
Viscosity (23 °C)	Not applicable.	ISO 2431-1993
VOC* less exempt (lbs/gal)	3.7	
VOC* as packaged (lbs/gal)	3.4	

* VOC less exempt (theoretical) and VOC as packaged (theoretical) are based upon the VOC of the packaged material at the point of manufacture.

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10. Stability and reactivity

Stability
Stable

Conditions to avoid
Stable under recommended storage conditions.

Materials to avoid
None reasonably foreseeable.

Hazardous decomposition products
When exposed to high temperatures may produce hazardous decomposition products such as carbon monoxide and dioxide, smoke, oxides of nitrogen.

Hazardous Polymerization
Will not occur.

Sensitivity to Static Discharge
If heated above the flash point, solvent vapors in air may explode if static grounding and bonding is not used during transfer of this product.

Sensitivity to Mechanical Impact
None known.

11. Toxicological information

Information on likely routes of exposure

Inhalation
Ingestion
May result in gastrointestinal distress.

Skin or eye contact
May cause irritation or burning of the eyes. Repeated or prolonged liquid contact may cause skin irritation with discomfort and dermatitis.

Delayed and immediate effects and also chronic effects from short and long term exposure:

Acute oral toxicity
not hazardous

Acute dermal toxicity
not hazardous

Acute inhalation toxicity
not hazardous

% of unknown composition 1.6 %

Skin corrosion/irritation
Not classified according to GHS criteria

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Serious eye damage/eye irritation

heptan-2-one	Category 2B
acetone	Category 2A
ethyl acetate	Category 2A
propan-2-ol	Category 2A
butanone	Category 2A
ethylbenzene	Category 2B

Respiratory sensitisation
Not classified according to GHS criteria

Skin sensitisation
Not classified according to GHS criteria

Germ cell mutagenicity
Not classified according to GHS criteria

Carcinogenicity
Not classified according to GHS criteria

Toxicity for reproduction
Not classified according to GHS criteria

Target Organ Systemic Toxicant - Single exposure
Not classified according to GHS criteria

Target Organ Systemic Toxicant - Repeated exposure
Not classified according to GHS criteria

Aspiration toxicity
Not classified according to GHS criteria

Numerical measures of toxicity (acute toxicity estimation (ATE),etc.)
No information available.

Symptoms related to the physical, chemical and toxicological characteristics
Exposure to component solvents vapours concentration in excess of the stated occupational exposure limit may result in adverse health effect such as mucous membrane and respiratory system irritation and adverse effect on kidney, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness. Through skin resorbtion, solvents can cause some of the effects described here. Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin resulting in non-allergic contact dermatitis and absorption through the skin. The liquid splashed in the eyes may cause irritation and reversible damage.

Whether the hazardous chemical is listed by NTP, IARC or OSHA

carbon black	IARC 2B
ethylbenzene	IARC 2B

12. Ecological information

There are no data available on the product itself. The product should not be allowed to enter drains or watercourses. The product contains an organic linked halogen. It may contribute to the AOX-value.

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13. Disposal considerations

Waste Disposal Method
Do not allow material to contaminate ground water systems. Incinerate or otherwise dispose of waste material in accordance with Federal, State, Provincial, and local requirements. Do not incinerate in closed containers.

14. Transport information

International transport regulations

IMDG (Sea transport)	
UN number:	1263
Proper shipping name:	PAINT
Hazard Class:	3
Subsidiary Hazard Class:	Not applicable.
Packing group:	III
Marine Pollutant:	no
ICAO/IATA (Air transport)	
UN number:	1263
Proper shipping name:	PAINT
Hazard Class:	3
Subsidiary Hazard Class:	Not applicable.
Packing group:	III
DOT	
UN number:	1263
Proper shipping name:	PAINT
Hazard Class:	3
Subsidiary Hazard Class:	Not applicable.
Packing group:	III
Marine Pollutant:	no
EmS:	F-E,S-E

Matters needing attention for transportation
Confirm that there is no breakage, corrosion, or leakage from the container before shipping. Be sure to prevent damage to cargo by loading so as to avoid falling, dropping, or collapse. Ship in appropriate containers with denotation of the content in accordance with the relevant statutes and rules.

15. Regulatory information

TSCA Status
In compliance with TSCA Inventory requirements for commercial purposes.

DSL Status
Product is not DSL listed because one or more ingredients are not on the DSL inventory.

Photochemical Reactivity
Photochemically reactive

US. California Safe Drinking Water & Toxic Enforcement Act (Proposition 65)
WARNING! This product contains a chemical known to the State of California to cause cancer.

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MMRX-02464

Regulatory information

CAS #	Ingredient	EPCRA 302	EPCRA TPQ	EPCRA RQ	EPCRA 311 - 312	EPCRA 313	CERCLA RQ(lbs)	CAA HAP
No information available.	Acrylic polymer	N	NR	NR	NA	N	NR	N
110-43-0	Methyl amyl ketone	N	NR	NR	A,C,F	N	NR	N
69153-52-2	Polyester resin	N	NR	NR	NA	N	NR	N
7429-90-5	Aluminum	N	NR	NR	,A,C,F,N,R	Y	NR	N
67-64-1	Acetone	N	NR	NR	A,C,F	N	5,000	N
123-86-4	Butyl acetate	N	NR	NR	A,C,F	N	NR	N
No information available.	Acrylic resin	N	NR	NR	NA	N	NR	N
92797-60-9	Amorphous silica	N	NR	NR	,A,C,F,N,R	N	NR	N
763-69-9	Ethyl 3-ethoxy propionate	N	NR	NR	NA	N	NR	N
141-78-6	Ethyl acetate	N	NR	NR	C,F	N	NR	N
64742-48-9	Hydrotreated heavy naphtha (petroleum)	N	NR	NR	,A,C,F,N,R	N	NR	N
67-63-0	Isopropyl alcohol	N	NR	NR	,A,C,F,N,R	N	NR	N
78-93-3	Methyl ethyl ketone	N	NR	NR	A,C,F	N	5,000	N
8052-41-3	Stoddard solvent	N	NR	NR	,A,C,F,N,R	N	NR	N
169276-18-0*	Synthetic resin	N	NR	NR	NA	N	NR	N
1333-86-4	Carbon black	N	NR	NR	,A,C,F,N,R	N	NR	N
100-41-4	Ethylbenzene	N	NR	NR	A,C,F	Y	1,000	Y

Key:

EPCRA	Emergency Planning and Community Right-to-know Act (aka Title III, SARA)
302	Extremely hazardous substances
311/312 Categories	F = Fire Hazard R = Reactivity Hazard P = Pressure Related Hazard A = Acute Hazard C = Chronic Hazard
313 Information	Section 313 Supplier Notification - The chemicals listed above with a 'Y' in the 313 column are subject to reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know act of 1986 and of 40 CFR 372.
CERCLA	Comprehensive Emergency Response, Compensation and Liability Act of 1980.
HAP	Listed as a Clean Air Act Hazardous Air Pollutant.
TPQ	Threshold Planning Quantity.
RQ	Reportable Quantity
NA	not available
NR	not regulated

16. Other information

HMIS rating H: 2 F: 2 R: 1

Glossary of Terms:

ACGIH	American Conference of Governmental Industrial Hygienists.
IARC	International Agency for Research on Cancer.
NTP	National Toxicology Program.
OEL	Occupational Exposure Limit
OSHA	Occupational Safety and Health Administration.
STEL	Short term exposure limit.
TWA	Time-weighted average.
PNOR	Particles not otherwise regulated.
PNOC	Particles not otherwise classified.

NOTE: The list (above) of glossary terms may be modified.

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MMRX-02464

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SDS prepared by:
Axalta Coating Systems Regulatory Affairs
Report version

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M/MRX-02464

1. Identification of the substance/mixture and of the company/undertaking

Product name	COLOR ATLAS BLUE	
Product code	CAE76 SDS	
Intended use	Coating for professional use	
	Axalta Coating Systems, LLC Applied Corporate Center 50 Applied Card Way, Suite 300 US Glen Mills, PA 19342	
Telephone	Product information	(855) 6-AXALTA
	Medical emergency	(855) 274-5698
	Transportation emergency	(800) 424-9300 (CHEMTREC)

2. Hazards identification

This preparation is hazardous per the following GHS criteria

GHS-Classification

Flammable liquids	Category 3
Serious eye damage/eye irritation	Category 2A

Endpoints which are ""not classified"", ""cannot classified"" and ""not applicable"" are not shown

GHS-Labelling

Hazard symbols	
Signal word	Warning
Hazard statements	Flammable liquid and vapour. Causes serious eye irritation.
Precautionary statements	Wear eye protection/ face protection. Ground/bond container and receiving equipment. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Keep container tightly closed. Take precautionary measures against static discharge. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Wear protective gloves/ eye protection/ face protection. If eye irritation persists: Get medical advice/ attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower. Store in a well-ventilated place. Keep cool. Dispose of contents/container in accordance with local regulations.

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Other hazards which do not result in classification
None known.

The following percentage of the mixture consists of ingredient(s) with unknown acute toxicity:
15.1 %

3. Composition/information on ingredients

Mixture of synthetic resins, pigments, and solvents

Components

CAS-No.	Chemical Name	Concentration	GHS Hazardous
No information available.	Acrylic polymer	20 - 30%	
69153-52-2	Polyester resin	10 - 20%	
67-64-1	Acetone	4 - 15%	√
123-86-4	Butyl acetate	4 - 15%	√
141-78-6	Ethyl acetate	4 - 15%	√
110-43-0	Methyl amyl ketone	4 - 15%	√
78-93-3	Methyl ethyl ketone	4 - 15%	√
No information available.	Acrylic resin	1 - 5%	
763-69-9	Ethyl 3-ethoxy propionate	1 - 4%	√
67-63-0	Isopropyl alcohol	1 - 4%	√
12001-26-2	Mica	1 - 5%	
5521-31-3	Perylene maroon	1 - 5%	
169276-18-0*	Synthetic resin	1 - 5%	
13463-67-7	Titanium dioxide	1.1%	

OSHA Hazardous: Yes
* Assigned CAS No. - An official CAS No. does not exist. The CAS No. shown is for a similar chemical.

4. First aid measures

Eye contact
Remove contact lenses. Irrigate copiously with clean, fresh water for at least 15 minutes, holding the eyelids apart. Seek medical advice.

Skin contact
Do NOT use solvents or thinners. Take off all contaminated clothing immediately. Wash skin thoroughly with soap and water or use recognized skin cleanser. If skin irritation persists, call a physician.

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Inhalation
Avoid inhalation of vapour or mist. Move to fresh air in case of accidental inhalation of vapours. If breathing is irregular or stopped, administer artificial respiration. If unconscious place in recovery position and seek medical advice. If symptoms persist, call a physician.

Ingestion
If swallowed, seek medical advice immediately and show this container or label. Do NOT induce vomiting. Keep at rest.

Most Important Symptoms/effects, acute and delayed

Inhalation
Ingestion
May result in gastrointestinal distress.

Skin or eye contact
May cause irritation or burning of the eyes. Repeated or prolonged liquid contact may cause skin irritation with discomfort and dermatitis.

Indication of Immediate medical attention and special treatment needed if necessary
No data available on the product. See section 3 and 11 for hazardous ingredients found in the product.

5. Firefighting measures

Suitable extinguishing media
Extinguishing media which shall not be used for safety reasons
High volume water jet

Hazardous combustion products
CO, CO2, smoke, and oxides of any heavy metals that are reported in "Composition, Information on Ingredients" section.

Fire and Explosion Hazards
Combustible liquid. When heated above the flashpoint, emits vapors which, when mixed with air, will burn if an ignition source is present. Fine mist or sprays could ignite at temperatures below the flashpoint.

Special Protective Equipment and Fire Fighting Procedures
Full protective flameproof clothing should be worn as appropriate. Wear self contained breathing apparatus for fire fighting if necessary. In the event of fire, cool tanks with water spray. Do not allow run-off from fire fighting to enter public sewer systems or public waterways.

6. Accidental release measures

Procedures for cleaning up spills or leaks
Ventilate area. If heated above the flashpoint, remove sources of ignition. Prevent skin and eye contact and breathing of vapor. Wear a properly fitted air-purifying respirator with organic vapor cartridges (NIOSH approved TC-23C), eye protection, gloves and protective clothing. Confine, remove with inert absorbent, and dispose of properly.

Environmental precautions
Do not let product enter drains. Notify the respective authorities in accordance with local law in the case of contamination of rivers, lakes or waste water systems.

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7. Handling and storage

Precautions for safe handling
Observe label precautions. Keep away from heat, flame and other sources of ignition. When heated above its flash point, this must be handled as if it were a flammable liquid. Close container after each use. Do not transfer contents to bottles or unlabeled containers. Wash thoroughly after handling and before eating or smoking.
If material is a coating: do not sand, flame cut, braze or weld dry coating without a NIOSH approved air purifying respirator with particulate filters or appropriate ventilation, and gloves. Combustible dust clouds may be created where operations produce fine material (dust). Avoid formation of significant deposits of material as they may become airborne and form combustible dust clouds. Build up of fine material should be cleaned using gentle sweeping or vacuuming in accordance with best practices. Cleaning methods (e.g. compressed air) which can generate potentially combustible dust clouds should not be used.

Advice on protection against fire and explosion
Solvent vapours are heavier than air and may spread along floors. Vapors may form explosive mixtures with air and will burn when an ignition source is present. Always keep in containers of same material as the original one. Never use pressure to empty container: container is not a pressure vessel. The accumulation of contaminated rags may result in spontaneous combustion. Good housekeeping standards and regular safe removal of waste materials will minimize the risks of spontaneous combustion and other fire hazards.

Storage
Requirements for storage areas and containers
Observe label precautions. Store in a dry, well ventilated place away from sources of heat, ignition and direct sunlight. No smoking. Prevent unauthorized access. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Advice on common storage
Store separately from oxidizing agents and strongly alkaline and strongly acidic materials.

OSHA/NFPA Storage Classification: II

8. Exposure controls/personal protection

Engineering controls and work practices
Provide adequate ventilation. This should be achieved by a good general extraction and -if practically feasible- by the use of a local exhaust ventilation. If these are not sufficient to maintain concentrations of particulates and solvent vapour below the OEL, suitable respiratory protection must be worn.

National occupational exposure limits

CAS-No.	Chemical Name	Source	Time	Type	Value	Note
67-64-1	Acetone	ACGIH	15 min	STEL	750 ppm	
			8 hr	TWA	500 ppm	
		OSHA	8 hr	TWA	1,000 ppm	
		Dupont	8 & 12 hour	TWA	500 ppm	
123-86-4	Butyl acetate	ACGIH	15 min	STEL	200 ppm	
			8 hr	TWA	150 ppm	
		OSHA	8 hr	TWA	150 ppm	
141-78-6	Ethyl acetate	ACGIH	8 hr	TWA	400 ppm	
		OSHA	8 hr	TWA	400 ppm	
110-43-0	Methyl amyl ketone	ACGIH	8 hr	TWA	50 ppm	

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CAS-No.	Chemical Name	Source	Time	Type	Value	Note
		OSHA	8 hr	TWA	100 ppm	
78-93-3	Methyl ethyl ketone	ACGIH	15 min	STEL	300 ppm	
			8 hr	TWA	200 ppm	
		OSHA	8 hr	TWA	200 ppm	
		Dupont	15 min	TWA	300 ppm	
			8 & 12 hour	TWA	200 ppm	
12001-26-2	Mica	ACGIH	8 hr	TWA	3 mg/m3	Respirable Dust None None
		OSHA	8 hr	PEL	20 mppcf	None None None
			8 hr	TWA	3 mg/m3	Respirable Dust None None
13463-67-7	Titanium dioxide	OSHA	8 hr	TWA	15 mg/m3	Total Dust
		Dupont	8 & 12 hour	TWA	10 mg/m3	Total Dust
			8 & 12 hour	TWA	5 mg/m3	Respirable Dust

** STEL = Short term exposure limit.
TWA = Time-weighted average.
PEL = Permissible Exposure Limit.

Protective equipment
Personal protective equipment should be worn to prevent contact with eyes, skin or clothing.

Respiratory protection
Do not breathe vapors or mists. Wear an appropriate, properly fitted NIOSH approved respirator during application and until all vapors and spray mists are exhausted unless air monitoring demonstrates vapor/mist levels are below applicable limits. If respirators are required, use a properly fitted air-purifying respirator with organic vapor cartridges (NIOSH approved TC-23C) and particulate filter (NIOSH TC-84A). In confined spaces, or in situations where continuous spray operations are typical, or if proper air-purifying respirator fit is not possible, wear a positive pressure, supplied-air respirator (NIOSH TC-19C). In all cases, follow respirator manufacturer's directions for respirator use.'

Eye protection
Desirable in all industrial situations. Goggles are preferred to prevent eye irritation. If safety glasses are substituted, include splash guard or side shields.

Skin and body protection
Neoprene gloves and coveralls are recommended.

Hygiene measures
Wash skin thoroughly with soap and water or use recognized skin cleanser. Do NOT use solvents or thinners.

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MMPIX-024473

Environmental exposure controls
Do not let product enter drains. For ecological information, refer to Ecological Information Section 12.

9. Physical and chemical properties

Appearance

Form: liquid Colour:

Flash point	104 °F	
Ignition temperature	377 °C	
Lower Explosive Limit	1.1 %	
Upper Explosive Limit	12.8 %	
Evapouration rate	Slower than Ether	
Vapor pressure of principal solvent	28.1 hPa	
Water solubility	appreciable	
Vapor density of principal solvent (Air = 1)	3.9	
Approx. Boiling Range	152 °C	
Approx. Freezing Range	Not applicable.	
Gallon Weight (lbs/gal)	8.42	
Specific Gravity	1.01	
Percent Volatile By Volume	55.83%	
Percent Volatile By Weight	46.49%	
Percent Solids By Volume	44.17%	
Percent Solids By Weight	53.51%	
pH (waterborne systems only)	Not applicable.	
Partition coefficient: n-octanol/water	no data available	
Ignition temperature	377 °C	DIN 51794
Decomposition temperature		
Viscosity (23 °C)	Not applicable.	ISO 2431-1993
VOC* less exempt (lbs/gal)	3.7	
VOC* as packaged (lbs/gal)	3.4	

* VOC less exempt (theoretical) and VOC as packaged (theoretical) are based upon the VOC of the packaged material at the point of manufacture.

10. Stability and reactivity

Stability
Stable

Conditions to avoid
Stable under recommended storage conditions.

Materials to avoid
None reasonably foreseeable.

Hazardous decomposition products
When exposed to high temperatures may produce hazardous decomposition products such as carbon monoxide and dioxide, smoke, oxides of nitrogen.

Hazardous Polymerization
Will not occur.

Sensitivity to Static Discharge
If heated above the flash point, solvent vapors in air may explode if static grounding and bonding is not used during transfer of this product.

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Sensitivity to Mechanical Impact
None known.

11. Toxicological information

Information on likely routes of exposure

Inhalation
Ingestion
May result in gastrointestinal distress.

Skin or eye contact
May cause irritation or burning of the eyes. Repeated or prolonged liquid contact may cause skin irritation with discomfort and dermatitis.

Delayed and immediate effects and also chronic effects from short and long term exposure:

Acute oral toxicity
not hazardous

Acute dermal toxicity
not hazardous

Acute inhalation toxicity
not hazardous

% of unknown composition 15.1 %

Skin corrosion/irritation
Not classified according to GHS criteria

Serious eye damage/eye irritation

acetone	Category 2A
ethyl acetate	Category 2A
heptan-2-one	Category 2B
butanone	Category 2A
propan-2-ol	Category 2A

Respiratory sensitisation
Not classified according to GHS criteria

Skin sensitisation
Not classified according to GHS criteria

Germ cell mutagenicity
Not classified according to GHS criteria

Carcinogenicity
Not classified according to GHS criteria

Toxicity for reproduction
Not classified according to GHS criteria

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Target Organ Systemic Toxicant - Single exposure
Not classified according to GHS criteria

Target Organ Systemic Toxicant - Repeated exposure
Not classified according to GHS criteria

Aspiration toxicity
Not classified according to GHS criteria

Numerical measures of toxicity (acute toxicity estimation (ATE),etc.)
No information available.

Symptoms related to the physical, chemical and toxicological characteristics
Exposure to component solvents vapours concentration in excess of the stated occupational exposure limit may result in adverse health effect such as mucous membrane and respiratory system irritation and adverse effect on kidney, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness. Through skin resorbtion, solvents can cause some of the effects described here. Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin resulting in non-allergic contact dermatitis and absorption through the skin. The liquid splashed in the eyes may cause irritation and reversible damage.

Whether the hazardous chemical is listed by NTP, IARC or OSHA

Titanium dioxide	IARC 2B

12. Ecological information

There are no data available on the product itself. The product should not be allowed to enter drains or watercourses. The product contains an organic linked halogen. It may contribute to the AOX-value.

13. Disposal considerations

Waste Disposal Method
Do not allow material to contaminate ground water systems. Incinerate or otherwise dispose of waste material in accordance with Federal, State, Provincial, and local requirements. Do not incinerate in closed containers.

14. Transport information

International transport regulations

IMDG (Sea transport)	
UN number:	1263
Proper shipping name:	PAINT
Hazard Class:	3
Subsidiary Hazard Class:	Not applicable.
Packing group:	III
Marine Pollutant:	no
ICAO/IATA (Air transport)	
UN number:	1263
Proper shipping name:	PAINT
Hazard Class:	3
Subsidiary Hazard Class:	Not applicable.
Packing group:	III

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DOT

UN number:	1263
Proper shipping name:	PAINT
Hazard Class:	3
Subsidiary Hazard Class:	Not applicable.
Packing group:	III
Marine Pollutant:	no
EmS:	F-E,S-E

Matters needing attention for transportation
Confirm that there is no breakage, corrosion, or leakage from the container before shipping. Be sure to prevent damage to cargo by loading so as to avoid falling, dropping, or collapse. Ship in appropriate containers with denotation of the content in accordance with the relevant statutes and rules.

15. Regulatory information

TSCA Status
In compliance with TSCA Inventory requirements for commercial purposes.

DSL Status
Product is not DSL listed because one or more ingredients are not on the DSL inventory.

Photochemical Reactivity
Non-photochemically reactive

Regulatory information

		EPCRA					CERCLA	CAA
CAS #	Ingredient	302	TPQ	RQ	311 - 312	313	RQ(lbs)	HAP
No information available.	Acrylic polymer	N	NR	NR	NA	N	NR	N
69153-52-2	Polyester resin	N	NR	NR	NA	N	NR	N
67-64-1	Acetone	N	NR	NR	A,C,F	N	5,000	N
123-86-4	Butyl acetate	N	NR	NR	A,C,F	N	NR	N
141-78-6	Ethyl acetate	N	NR	NR	C,F	N	NR	N
110-43-0	Methyl amyl ketone	N	NR	NR	A,C,F	N	NR	N
78-93-3	Methyl ethyl ketone	N	NR	NR	A,C,F	N	5,000	N
No information available.	Acrylic resin	N	NR	NR	NA	N	NR	N
763-69-9	Ethyl 3-ethoxy propionate	N	NR	NR	NA	N	NR	N
67-63-0	Isopropyl alcohol	N	NR	NR	,A,C,F,N,R	N	NR	N
12001-26-2	Mica	N	NR	NR	,A,C,F,N,R	N	NR	N
5521-31-3	Perylene maroon	N	NR	NR	,A,C,F,N,R	N	NR	N
169276-18-0*	Synthetic resin	N	NR	NR	NA	N	NR	N
13463-67-7	Titanium dioxide	N	NR	NR	,A,C,F,N,R	N	NR	N

Key:

EPCRA	Emergency Planning and Community Right-to-know Act (aka Title III, SARA)
302	Extremely hazardous substances
311/312 Categories	F = Fire Hazard R = Reactivity Hazard P = Pressure Related Hazard A = Acute Hazard C = Chronic Hazard
313 Information	Section 313 Supplier Notification - The chemicals listed above with a 'Y' in the 313 column are subject to reporting requirements of Section 313 of the Emergency Planning and Community

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	Right-to-Know act of 1986 and of 40 CFR 372.
CERCLA	Comprehensive Emergency Response, Compensation and Liability Act of 1980.
HAP	Listed as a Clean Air Act Hazardous Air Pollutant.
TPQ	Threshold Planning Quantity.
RQ	Reportable Quantity
NA	not available
NR	not regulated

16. Other information

HMIS rating H: 2 F: 2 R: 0

Glossary of Terms:

ACGIH	American Conference of Governmental Industrial Hygienists.
IARC	International Agency for Research on Cancer.
NTP	National Toxicology Program.
OEL	Occupational Exposure Limit
OSHA	Occupational Safety and Health Administration.
STEL	Short term exposure limit.
TWA	Time-weighted average.
PNOR	Particles not otherwise regulated.
PNOC	Particles not otherwise classified.

NOTE: The list (above) of glossary terms may be modified.

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The document reflects information provided to Axalta Coating Systems by its suppliers. Information is accurate to the best of our knowledge and is subject to change as new data is received by Axalta Coating Systems. Persons receiving this information should make their own determination as to its suitability for their purposes prior to use. The information on this Material Safety Data Sheet relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process.
SDS prepared by:
Axalta Coating Systems Regulatory Affairs
Report version

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MMRX-02473

1. Identification of the substance/mixture and of the company/undertaking

Product name	YELLOW	
Product code	CAE153EW	
Intended use	Coating for professional use	
	Axalta Coating Systems, LLC Applied Corporate Center 50 Applied Card Way, Suite 300 US Glen Mills, PA 19342	
Telephone	Product information Medical emergency Transportation emergency	(855) 6-AXALTA (855) 274-5698 (800) 424-9300 (CHEMTREC)

2. Hazards identification

This preparation is hazardous per the following GHS criteria

GHS-Classification

Flammable liquids	Category 3
Serious eye damage/eye irritation	Category 2A

Endpoints which are ""not classified"", ""cannot classified"" and ""not applicable"" are not shown

GHS-Labelling

Hazard symbols	
Signal word	Warning
Hazard statements	Flammable liquid and vapour. Causes serious eye irritation.
Precautionary statements	Wear eye protection/ face protection. Ground/bond container and receiving equipment. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Keep container tightly closed. Take precautionary measures against static discharge. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Wear protective gloves/ eye protection/ face protection. If eye irritation persists: Get medical advice/ attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower. Store in a well-ventilated place. Keep cool. Dispose of contents/container in accordance with local regulations.

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NMRX-02477

Other hazards which do not result in classification
None known.

The following percentage of the mixture consists of ingredient(s) with unknown acute toxicity:
0 %

3. Composition/information on ingredients

Mixture of synthetic resins, pigments, and solvents

Components

CAS-No.	Chemical Name	Concentration	GHS Hazardous
No information available.	Acrylic polymer	20 - 30%	
110-43-0	Methyl amyl ketone	15 - 26%	√
69153-52-2	Polyester resin	10 - 20%	
7429-90-5	Aluminum	6%	√
67-64-1	Acetone	4 - 15%	√
123-86-4	Butyl acetate	4 - 15%	√
No information available.	Acrylic resin	1 - 5%	
92797-60-9	Amorphous silica	1 - 5%	
763-69-9	Ethyl 3-ethoxy propionate	1 - 4%	√
141-78-6	Ethyl acetate	1 - 4%	√
64742-47-8	Hydrotreated heavy naphtha (petroleum)	1 - 4%	√
64742-48-9	Hydrotreated heavy naphtha (petroleum)	1 - 4%	√
67-63-0	Isopropyl alcohol	1 - 4%	√
78-93-3	Methyl ethyl ketone	1 - 4%	√
8052-41-3	Stoddard solvent	1 - 4%	√
169276-18-0*	Synthetic resin	1 - 5%	
100-41-4	Ethylbenzene	0.1%	√

OSHA Hazardous: Yes
* Assigned CAS No. - An official CAS No. does not exist. The CAS No. shown is for a similar chemical.

4. First aid measures

Eye contact
Remove contact lenses. Irrigate copiously with clean, fresh water for at least 15 minutes, holding the eyelids apart. Seek medical advice.

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Skin contact
Do NOT use solvents or thinners. Take off all contaminated clothing immediately. Wash skin thoroughly with soap and water or use recognized skin cleanser. If skin irritation persists, call a physician.

Inhalation
Avoid inhalation of vapour or mist. Move to fresh air in case of accidental inhalation of vapours. If breathing is irregular or stopped, administer artificial respiration. If unconscious place in recovery position and seek medical advice. If symptoms persist, call a physician.

Ingestion
If swallowed, seek medical advice immediately and show this container or label. Do NOT induce vomiting. Keep at rest.

Most Important Symptoms/effects, acute and delayed

Inhalation
Ingestion
May result in gastrointestinal distress.

Skin or eye contact
May cause irritation or burning of the eyes. Repeated or prolonged liquid contact may cause skin irritation with discomfort and dermatitis.

Indication of immediate medical attention and special treatment needed if necessary
No data available on the product. See section 3 and 11 for hazardous ingredients found in the product.

5. Firefighting measures

Suitable extinguishing media
Extinguishing media which shall not be used for safety reasons
High volume water jet

Hazardous combustion products
CO, CO2, smoke, and oxides of any heavy metals that are reported in "Composition, Information on Ingredients" section.

Fire and Explosion Hazards
Combustible liquid. When heated above the flashpoint, emits vapors which, when mixed with air, will burn if an ignition source is present. Fine mist or sprays could ignite at temperatures below the flashpoint.

Special Protective Equipment and Fire Fighting Procedures
Full protective flameproof clothing should be worn as appropriate. Wear self contained breathing apparatus for fire fighting if necessary. In the event of fire, cool tanks with water spray. Do not allow run-off from fire fighting to enter public sewer systems or public waterways.

6. Accidental release measures

Procedures for cleaning up spills or leaks
Ventilate area. If heated above the flashpoint, remove sources of ignition. Prevent skin and eye contact and breathing of vapor. Wear a properly fitted air-purifying respirator with organic vapor cartridges (NIOSH approved TC-23C), eye protection, gloves and protective clothing. Confine, remove with inert absorbent, and dispose of properly.

Environmental precautions
Do not let product enter drains. Notify the respective authorities in accordance with local law in the case of contamination of rivers, lakes or waste water systems.

7. Handling and storage

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Precautions for safe handling
Observe label precautions. Keep away from heat, flame and other sources of ignition. When heated above its flash point, this must be handled as if it were a flammable liquid. Close container after each use. Do not transfer contents to bottles or unlabeled containers. Wash thoroughly after handling and before eating or smoking.
If material is a coating: do not sand, flame cut, braze or weld dry coating without a NIOSH approved air purifying respirator with particulate filters or appropriate ventilation, and gloves. Combustible dust clouds may be created where operations produce fine material (dust). Avoid formation of significant deposits of material as they may become airborne and form combustible dust clouds. Build up of fine material should be cleaned using gentle sweeping or vacuuming in accordance with best practices. Cleaning methods (e.g. compressed air) which can generate potentially combustible dust clouds should not be used.

Advice on protection against fire and explosion
Solvent vapours are heavier than air and may spread along floors. Vapors may form explosive mixtures with air and will burn when an ignition source is present. Always keep in containers of same material as the original one. Never use pressure to empty container: container is not a pressure vessel. The accumulation of contaminated rags may result in spontaneous combustion. Good housekeeping standards and regular safe removal of waste materials will minimize the risks of spontaneous combustion and other fire hazards.

Storage
Requirements for storage areas and containers
Observe label precautions. Store in a dry, well ventilated place away from sources of heat, ignition and direct sunlight. No smoking. Prevent unauthorized access. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Advice on common storage
Store separately from oxidizing agents and strongly alkaline and strongly acidic materials.

OSHA/NFPA Storage Classification: II

8. Exposure controls/personal protection

Engineering controls and work practices
Provide adequate ventilation. This should be achieved by a good general extraction and -if practically feasible- by the use of a local exhaust ventilation. If these are not sufficient to maintain concentrations of particulates and solvent vapour below the OEL, suitable respiratory protection must be worn.

National occupational exposure limits

CAS-No.	Chemical Name	Source	Time	Type	Value	Note
110-43-0	Methyl amyl ketone	ACGIH	8 hr	TWA	50 ppm	
		OSHA	8 hr	TWA	100 ppm	
7429-90-5	Aluminum	OSHA	8 hr	TWA	15 mg/m3	Total Dust
			8 hr	TWA	5 mg/m3	Respirable Dust
		Dupont	8 & 12 hour	TWA	0.5 mg/m3	
67-64-1	Acetone	ACGIH	15 min	STEL	750 ppm	
			8 hr	TWA	500 ppm	
		OSHA	8 hr	TWA	1,000 ppm	
		Dupont	8 & 12 hour	TWA	500 ppm	
123-86-4	Butyl acetate	ACGIH	15 min	STEL	200 ppm	

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CAS-No.	Chemical Name	Source	Time	Type	Value	Note
			8 hr	TWA	150 ppm	
		OSHA	8 hr	TWA	150 ppm	
92797-60-9	Amorphous silica	ACGIH	8 hr	TWA	2 mg/m3	Respirable Dust
		OSHA	15 min	STEL	1 mg/m3	
		Dupont	8 hr	TWA	1 mg/m3	
141-78-6	Ethyl acetate	ACGIH	8 hr	TWA	400 ppm	
		OSHA	8 hr	TWA	400 ppm	
64742-48-9	Hydrotreated heavy naphtha (petroleum)	ACGIH	8 hr	TWA	100 ppm	
		OSHA	8 hr	TWA	500 ppm	
		Dupont	8 hr	TWA	100 ppm	
78-93-3	Methyl ethyl ketone	ACGIH	15 min	STEL	300 ppm	
			8 hr	TWA	200 ppm	
		OSHA	8 hr	TWA	200 ppm	
		Dupont	15 min	TWA	300 ppm	
			8 & 12 hour	TWA	200 ppm	
8052-41-3	Stoddard solvent	ACGIH	8 hr	TWA	100 ppm	
		OSHA		TWA	500 ppm	
		Dupont	15 min	STEL	100 ppm	
			8 & 12 hour	TWA	50 ppm	
100-41-4	Ethylbenzene	ACGIH	8 hr	TWA	20 ppm	
		OSHA	8 hr	TWA	100 ppm	
		Dupont	8 & 12 hour	TWA	25 ppm	

** TWA = Time-weighted average.
STEL = Short term exposure limit.

Protective equipment
Personal protective equipment should be worn to prevent contact with eyes, skin or clothing.

Respiratory protection
Do not breathe vapors or mists. Wear an appropriate, properly fitted NIOSH approved respirator during application and until all vapors and spray mists are exhausted unless air monitoring demonstrates vapor/mist levels are below applicable limits. If respirators are required, use a properly fitted air-purifying respirator with organic vapor cartridges (NIOSH approved TC-23C) and particulate filter (NIOSH TC-84A). In confined spaces, or in situations where continuous spray operations are typical, or if proper air-purifying

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respirator fit is not possible, wear a positive pressure, supplied-air respirator (NIOSH TC-19C). In all cases, follow respirator manufacturer's directions for respirator use.'

Eye protection
Desirable in all industrial situations. Goggles are preferred to prevent eye irritation. If safety glasses are substituted, include splash guard or side shields.

Skin and body protection
Neoprene gloves and coveralls are recommended.

Hygiene measures
Wash skin thoroughly with soap and water or use recognized skin cleanser. Do NOT use solvents or thinners.

Environmental exposure controls
Do not let product enter drains. For ecological information, refer to Ecological Information Section 12.

9. Physical and chemical properties

Appearance

Form: liquid Colour:

Flash point	104 °F	
Ignition temperature	232 °C	
Lower Explosive Limit	1.1 %	
Upper Explosive Limit	12.8 %	
Evapouration rate	Slower than Ether	
Vapor pressure of principal solvent	23.5 hPa	
Water solubility	appreciable	
Vapor density of principal solvent (Air = 1)	3.9	
Approx. Boiling Range	152 °C	
Approx. Freezing Range	Not applicable.	
Gallon Weight (lbs/gal)	8.34	
Specific Gravity	1.00	
Percent Volatile By Volume	56.28%	
Percent Volatile By Weight	46.75%	
Percent Solids By Volume	43.72%	
Percent Solids By Weight	53.25%	
pH (waterborne systems only)	Not applicable.	
Partition coefficient: n-octanol/water	no data available	
Ignition temperature	232 °C	DIN 51794
Decomposition temperature		
Viscosity (23 °C)	Not applicable.	ISO 2431-1993
VOC* less exempt (lbs/gal)	3.7	
VOC* as packaged (lbs/gal)	3.4	

* VOC less exempt (theoretical) and VOC as packaged (theoretical) are based upon the VOC of the packaged material at the point of manufacture.

10. Stability and reactivity

Stability
Stable

Conditions to avoid
Stable under recommended storage conditions.

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Materials to avoid
None reasonably foreseeable.

Hazardous decomposition products
When exposed to high temperatures may produce hazardous decomposition products such as carbon monoxide and dioxide, smoke, oxides of nitrogen.

Hazardous Polymerization
Will not occur.

Sensitivity to Static Discharge
If heated above the flash point, solvent vapors in air may explode if static grounding and bonding is not used during transfer of this product.

Sensitivity to Mechanical Impact
None known.

11. Toxicological information

Information on likely routes of exposure

Inhalation
Ingestion
May result in gastrointestinal distress.

Skin or eye contact
May cause irritation or burning of the eyes. Repeated or prolonged liquid contact may cause skin irritation with discomfort and dermatitis.

Delayed and immediate effects and also chronic effects from short and long term exposure:

Acute oral toxicity
not hazardous

Acute dermal toxicity
not hazardous

Acute inhalation toxicity
not hazardous

% of unknown composition 0 %

Skin corrosion/irritation
Not classified according to GHS criteria

Serious eye damage/eye irritation

heptan-2-one	Category 2B
acetone	Category 2A
ethyl acetate	Category 2A
propan-2-ol	Category 2A
butanone	Category 2A
ethylbenzene	Category 2B

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Respiratory sensitisation
Not classified according to GHS criteria

Skin sensitisation
Not classified according to GHS criteria

Germ cell mutagenicity
Not classified according to GHS criteria

Carcinogenicity
Not classified according to GHS criteria

Toxicity for reproduction
Not classified according to GHS criteria

Target Organ Systemic Toxicant - Single exposure
Not classified according to GHS criteria

Target Organ Systemic Toxicant - Repeated exposure
Not classified according to GHS criteria

Aspiration toxicity
Not classified according to GHS criteria

Numerical measures of toxicity (acute toxicity estimation (ATE),etc.)
No information available.

Symptoms related to the physical, chemical and toxicological characteristics
Exposure to component solvents vapours concentration in excess of the stated occupational exposure limit may result in adverse health effect such as mucous membrane and respiratory system irritation and adverse effect on kidney, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness. Through skin resorbtion, solvents can cause some of the effects described here. Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin resulting in non-allergic contact dermatitis and absorption through the skin. The liquid splashed in the eyes may cause irritation and reversible damage.

Whether the hazardous chemical is listed by NTP, IARC or OSHA

ethylbenzene	IARC 2B

12. Ecological information

There are no data available on the product itself. The product should not be allowed to enter drains or watercourses.

13. Disposal considerations

Waste Disposal Method
Do not allow material to contaminate ground water systems. Incinerate or otherwise dispose of waste material in accordance with Federal, State, Provincial, and local requirements. Do not incinerate in closed containers.

14. Transport information

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International transport regulations

IMDG (Sea transport)	
UN number:	1263
Proper shipping name:	PAINT
Hazard Class:	3
Subsidiary Hazard Class:	Not applicable.
Packing group:	III
Marine Pollutant:	no
ICAO/IATA (Air transport)	
UN number:	1263
Proper shipping name:	PAINT
Hazard Class:	3
Subsidiary Hazard Class:	Not applicable.
Packing group:	III
DOT	
UN number:	1263
Proper shipping name:	PAINT
Hazard Class:	3
Subsidiary Hazard Class:	Not applicable.
Packing group:	III
Marine Pollutant:	no
EmS:	F-E,S-E

Matters needing attention for transportation
Confirm that there is no breakage, corrosion, or leakage from the container before shipping. Be sure to prevent damage to cargo by loading so as to avoid falling, dropping, or collapse. Ship in appropriate containers with denotation of the content in accordance with the relevant statutes and rules.

15. Regulatory information

TSCA Status
In compliance with TSCA Inventory requirements for commercial purposes.

DSL Status
Product is not DSL listed because one or more ingredients are not on the DSL inventory.

Photochemical Reactivity
Photochemically reactive

US. California Safe Drinking Water & Toxic Enforcement Act (Proposition 65)
WARNING! This product contains a chemical known to the State of California to cause cancer.

Regulatory information

		EPCRA					CERCLA	CAA
CAS #	Ingredient	302	TPQ	RQ	311 - 312	313	RQ(lbs)	HAP
No information available.	Acrylic polymer	N	NR	NR	NA	N	NR	N
110-43-0	Methyl amyl ketone	N	NR	NR	A,C,F	N	NR	N
69153-52-2	Polyester resin	N	NR	NR	NA	N	NR	N
7429-90-5	Aluminum	N	NR	NR	,A,C,F,N,R	Y	NR	N
67-64-1	Acetone	N	NR	NR	A,C,F	N	5,000	N
123-86-4	Butyl acetate	N	NR	NR	A,C,F	N	NR	N
No information available.	Acrylic resin	N	NR	NR	NA	N	NR	N

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CAS #	Ingredient	EPCRA 302	EPCRA TPQ	EPCRA RQ	EPCRA 311 - 312	EPCRA 313	CERCLA RQ(lbs)	CAA HAP
92797-60-9	Amorphous silica	N	NR	NR	,A,C,F,N,R	N	NR	N
763-69-9	Ethyl 3-ethoxy propionate	N	NR	NR	NA	N	NR	N
141-78-6	Ethyl acetate	N	NR	NR	C,F	N	NR	N
64742-47-8	Hydrotreated heavy naphtha (petroleum)	N	NR	NR	A,C,F	N	NR	N
64742-48-9	Hydrotreated heavy naphtha (petroleum)	N	NR	NR	,A,C,F,N,R	N	NR	N
67-63-0	Isopropyl alcohol	N	NR	NR	,A,C,F,N,R	N	NR	N
78-93-3	Methyl ethyl ketone	N	NR	NR	A,C,F	N	5,000	N
8052-41-3	Stoddard solvent	N	NR	NR	,A,C,F,N,R	N	NR	N
169276-18-0*	Synthetic resin	N	NR	NR	NA	N	NR	N
100-41-4	Ethylbenzene	N	NR	NR	A,C,F	Y	1,000	Y

Key:

EPCRA	Emergency Planning and Community Right-to-know Act (aka Title III, SARA)
302	Extremely hazardous substances
311/312 Categories	F = Fire Hazard R = Reactivity Hazard P = Pressure Related Hazard A = Acute Hazard C = Chronic Hazard
313 Information	Section 313 Supplier Notification - The chemicals listed above with a 'Y' in the 313 column are subject to reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know act of 1986 and of 40 CFR 372.
CERCLA	Comprehensive Emergency Response, Compensation and Liability Act of 1980.
HAP	Listed as a Clean Air Act Hazardous Air Pollutant.
TPQ	Threshold Planning Quantity.
RQ	Reportable Quantity
NA	not available
NR	not regulated

16. Other information

HMIS rating H: 2 F: 2 R: 1

Glossary of Terms:

ACGIH	American Conference of Governmental Industrial Hygienists.
IARC	International Agency for Research on Cancer.
NTP	National Toxicology Program.
OEL	Occupational Exposure Limit
OSHA	Occupational Safety and Health Administration.
STEL	Short term exposure limit.
TWA	Time-weighted average.
PNOR	Particles not otherwise regulated.
PNOC	Particles not otherwise classified.

NOTE: The list (above) of glossary terms may be modified.

Notice from Axalta Coating Systems
The document reflects information provided to Axalta Coating Systems by its suppliers. Information is accurate to the best of our knowledge and is subject to change as new data is received by Axalta Coating Systems. Persons receiving this information should make their own determination as to its suitability for their purposes prior to use. The information on this Material Safety Data Sheet relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process.
SDS prepared by:
Axalta Coating Systems Regulatory Affairs

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Report version

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1. Identification of the substance/mixture and of the company/undertaking

Product name	GREEN	
Product code	CAE254EW	
Intended use	Coating for professional use	
	Axalta Coating Systems, LLC Applied Corporate Center 50 Applied Card Way, Suite 300 US Glen Mills, PA 19342	
Telephone	Product information	(855) 6-AXALTA
	Medical emergency	(855) 274-5698
	Transportation emergency	(800) 424-9300 (CHEMTREC)

2. Hazards identification

This preparation is hazardous per the following GHS criteria

GHS-Classification

Flammable liquids	Category 3
Serious eye damage/eye irritation	Category 2A

Endpoints which are ""not classified"", ""cannot classified"" and ""not applicable"" are not shown

GHS-Labelling

Hazard symbols	
Signal word	Warning
Hazard statements	Flammable liquid and vapour. Causes serious eye irritation.
Precautionary statements	Wear eye protection/ face protection. Ground/bond container and receiving equipment. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Keep container tightly closed. Take precautionary measures against static discharge. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Wear protective gloves/ eye protection/ face protection. If eye irritation persists: Get medical advice/ attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower. Store in a well-ventilated place. Keep cool. Dispose of contents/container in accordance with local regulations.

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Other hazards which do not result in classification
None known.

The following percentage of the mixture consists of ingredient(s) with unknown acute toxicity:
11.9 %

3. Composition/information on ingredients

Mixture of synthetic resins, pigments, and solvents

Components

CAS-No.	Chemical Name	Concentration	GHS Hazardous
No information available.	Acrylic polymer	20 - 30%	
69153-52-2	Polyester resin	10 - 20%	
67-64-1	Acetone	4 - 15%	√
123-86-4	Butyl acetate	4 - 15%	√
141-78-6	Ethyl acetate	4 - 15%	√
110-43-0	Methyl amyl ketone	4 - 15%	√
No information available.	Acrylic resin	1 - 5%	
763-69-9	Ethyl 3-ethoxy propionate	1 - 4%	√
67-63-0	Isopropyl alcohol	1 - 4%	√
78-93-3	Methyl ethyl ketone	1 - 4%	√
12001-26-2	Mica	1 - 5%	
1328-53-6	Phthalocyanine green	1 - 5%	
169276-18-0*	Synthetic resin	1 - 5%	
13463-67-7	Titanium dioxide	1.6%	

OSHA Hazardous: Yes
* Assigned CAS No. - An official CAS No. does not exist. The CAS No. shown is for a similar chemical.

4. First aid measures

Eye contact
Remove contact lenses. Irrigate copiously with clean, fresh water for at least 15 minutes, holding the eyelids apart. Seek medical advice.

Skin contact
Do NOT use solvents or thinners. Take off all contaminated clothing immediately. Wash skin thoroughly with soap and water or use recognized skin cleanser. If skin irritation persists, call a physician.

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Inhalation
Avoid inhalation of vapour or mist. Move to fresh air in case of accidental inhalation of vapours. If breathing is irregular or stopped, administer artificial respiration. If unconscious place in recovery position and seek medical advice. If symptoms persist, call a physician.

Ingestion
If swallowed, seek medical advice immediately and show this container or label. Do NOT induce vomiting. Keep at rest.

Most important Symptoms/effects, acute and delayed

Inhalation
Ingestion
May result in gastrointestinal distress.

Skin or eye contact
May cause irritation or burning of the eyes. Repeated or prolonged liquid contact may cause skin irritation with discomfort and dermatitis.

Indication of immediate medical attention and special treatment needed if necessary
No data available on the product. See section 3 and 11 for hazardous ingredients found in the product.

5. Firefighting measures

Suitable extinguishing media
Extinguishing media which shall not be used for safety reasons
High volume water jet

Hazardous combustion products
CO, CO2, smoke, and oxides of any heavy metals that are reported in "Composition, Information on Ingredients" section.

Fire and Explosion Hazards
Combustible liquid. When heated above the flashpoint, emits vapors which, when mixed with air, will burn if an ignition source is present. Fine mist or sprays could ignite at temperatures below the flashpoint.

Special Protective Equipment and Fire Fighting Procedures
Full protective flameproof clothing should be worn as appropriate. Wear self contained breathing apparatus for fire fighting if necessary. In the event of fire, cool tanks with water spray. Do not allow run-off from fire fighting to enter public sewer systems or public waterways.

6. Accidental release measures

Procedures for cleaning up spills or leaks
Ventilate area. If heated above the flashpoint, remove sources of ignition. Prevent skin and eye contact and breathing of vapor. Wear a properly fitted air-purifying respirator with organic vapor cartridges (NIOSH approved TC-23C), eye protection, gloves and protective clothing. Confine, remove with inert absorbent, and dispose of properly.

Environmental precautions
Do not let product enter drains. Notify the respective authorities in accordance with local law in the case of contamination of rivers, lakes or waste water systems.

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7. Handling and storage

Precautions for safe handling
Observe label precautions. Keep away from heat, flame and other sources of ignition. When heated above its flash point, this must be handled as if it were a flammable liquid. Close container after each use. Do not transfer contents to bottles or unlabeled containers. Wash thoroughly after handling and before eating or smoking.
If material is a coating: do not sand, flame cut, braze or weld dry coating without a NIOSH approved air purifying respirator with particulate filters or appropriate ventilation, and gloves. Combustible dust clouds may be created where operations produce fine material (dust). Avoid formation of significant deposits of material as they may become airborne and form combustible dust clouds. Build up of fine material should be cleaned using gentle sweeping or vacuuming in accordance with best practices. Cleaning methods (e.g. compressed air) which can generate potentially combustible dust clouds should not be used.

Advice on protection against fire and explosion
Solvent vapours are heavier than air and may spread along floors. Vapors may form explosive mixtures with air and will burn when an ignition source is present. Always keep in containers of same material as the original one. Never use pressure to empty container: container is not a pressure vessel. The accumulation of contaminated rags may result in spontaneous combustion. Good housekeeping standards and regular safe removal of waste materials will minimize the risks of spontaneous combustion and other fire hazards.

Storage
Requirements for storage areas and containers
Observe label precautions. Store in a dry, well ventilated place away from sources of heat, ignition and direct sunlight. No smoking. Prevent unauthorized access. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Advice on common storage
Store separately from oxidizing agents and strongly alkaline and strongly acidic materials.

OSHA/NFPA Storage Classification: II

8. Exposure controls/personal protection

Engineering controls and work practices
Provide adequate ventilation. This should be achieved by a good general extraction and -if practically feasible- by the use of a local exhaust ventilation. If these are not sufficient to maintain concentrations of particulates and solvent vapour below the OEL, suitable respiratory protection must be worn.

National occupational exposure limits

CAS-No.	Chemical Name	Source	Time	Type	Value	Note
67-64-1	Acetone	ACGIH	15 min	STEL	750 ppm	
			8 hr	TWA	500 ppm	
		OSHA	8 hr	TWA	1,000 ppm	
		Dupont	8 & 12 hour	TWA	500 ppm	
123-86-4	Butyl acetate	ACGIH	15 min	STEL	200 ppm	
			8 hr	TWA	150 ppm	
		OSHA	8 hr	TWA	150 ppm	
141-78-6	Ethyl acetate	ACGIH	8 hr	TWA	400 ppm	
		OSHA	8 hr	TWA	400 ppm	
110-43-0	Methyl amyl ketone	ACGIH	8 hr	TWA	50 ppm	

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CAS-No.	Chemical Name	Source	Time	Type	Value	Note
		OSHA	8 hr	TWA	100 ppm	
78-93-3	Methyl ethyl ketone	ACGIH	15 min	STEL	300 ppm	
			8 hr	TWA	200 ppm	
		OSHA	8 hr	TWA	200 ppm	
		Dupont	15 min	TWA	300 ppm	
			8 & 12 hour	TWA	200 ppm	
12001-26-2	Mica	ACGIH	8 hr	TWA	3 mg/m3	Respirable Dust None None
		OSHA	8 hr	PEL	20 mppcf	None None None
			8 hr	TWA	3 mg/m3	Respirable Dust None None
1328-53-6	Phthalocyanine green	ACGIH		TWA	3 mg/m3	Respirable Dust
				TWA	10 mg/m3	inhalable dust
		OSHA		TWA	15 mg/m3	Total Dust
				TWA	5 mg/m3	Respirable Dust
13463-67-7	Titanium dioxide	OSHA	8 hr	TWA	15 mg/m3	Total Dust
		Dupont	8 & 12 hour	TWA	10 mg/m3	Total Dust
			8 & 12 hour	TWA	5 mg/m3	Respirable Dust

** STEL = Short term exposure limit.
TWA = Time-weighted average.
PEL = Permissible Exposure Limit.

Protective equipment
Personal protective equipment should be worn to prevent contact with eyes, skin or clothing.

Respiratory protection
Do not breathe vapors or mists. Wear an appropriate, properly fitted NIOSH approved respirator during application and until all vapors and spray mists are exhausted unless air monitoring demonstrates vapor/mist levels are below applicable limits. If respirators are required, use a properly fitted air-purifying respirator with organic vapor cartridges (NIOSH approved TC-23C) and particulate filter (NIOSH TC-84A). In confined spaces, or in situations where continuous spray operations are typical, or if proper air-purifying respirator fit is not possible, wear a positive pressure, supplied-air respirator (NIOSH TC-19C). In all cases, follow respirator manufacturer's directions for respirator use.'

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Eye protection
Desirable in all industrial situations. Goggles are preferred to prevent eye irritation. If safety glasses are substituted, include splash guard or side shields.

Skin and body protection
Neoprene gloves and coveralls are recommended.

Hygiene measures
Wash skin thoroughly with soap and water or use recognized skin cleanser. Do NOT use solvents or thinners.

Environmental exposure controls
Do not let product enter drains. For ecological information, refer to Ecological Information Section 12.

9. Physical and chemical properties

Appearance

Form: liquid Colour:

Flash point	104 °F	
Ignition temperature	330 °C	
Lower Explosive Limit	1.1 %	
Upper Explosive Limit	12.8 %	
Evapouration rate	Slower than Ether	
Vapor pressure of principal solvent	24.8 hPa	
Water solubility	appreciable	
Vapor density of principal solvent (Air = 1)	4	
Approx. Boiling Range	152 °C	
Approx. Freezing Range	Not applicable.	
Gallon Weight (lbs/gal)	8.45	
Specific Gravity	1.01	
Percent Volatile By Volume	54.92%	
Percent Volatile By Weight	45.92%	
Percent Solids By Volume	45.08%	
Percent Solids By Weight	54.08%	
pH (waterborne systems only)	Not applicable.	
Partition coefficient: n-octanol/water	no data available	
Ignition temperature	330 °C	DIN 51794
Decomposition temperature		
Viscosity (23 °C)	Not applicable.	ISO 2431-1993
VOC* less exempt (lbs/gal)	3.7	
VOC* as packaged (lbs/gal)	3.4	

* VOC less exempt (theoretical) and VOC as packaged (theoretical) are based upon the VOC of the packaged material at the point of manufacture.

10. Stability and reactivity

Stability
Stable

Conditions to avoid
Stable under recommended storage conditions.

Materials to avoid
None reasonably foreseeable.

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Hazardous decomposition products
When exposed to high temperatures may produce hazardous decomposition products such as carbon monoxide and dioxide, smoke, oxides of nitrogen.

Hazardous Polymerization
Will not occur.

Sensitivity to Static Discharge
If heated above the flash point, solvent vapors in air may explode if static grounding and bonding is not used during transfer of this product.

Sensitivity to Mechanical Impact
None known.

11. Toxicological information

Information on likely routes of exposure

Inhalation
Ingestion
May result in gastrointestinal distress.

Skin or eye contact
May cause irritation or burning of the eyes. Repeated or prolonged liquid contact may cause skin irritation with discomfort and dermatitis.

Delayed and immediate effects and also chronic effects from short and long term exposure:

Acute oral toxicity
not hazardous

Acute dermal toxicity
not hazardous

Acute inhalation toxicity
not hazardous

% of unknown composition 11.9 %

Skin corrosion/irritation
Not classified according to GHS criteria

Serious eye damage/eye irritation

acetone	Category 2A
ethyl acetate	Category 2A
heptan-2-one	Category 2B
propan-2-ol	Category 2A
butanone	Category 2A

Respiratory sensitisation
Not classified according to GHS criteria

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Skin sensitisation
Not classified according to GHS criteria

Germ cell mutagenicity
Not classified according to GHS criteria

Carcinogenicity
Not classified according to GHS criteria

Toxicity for reproduction
Not classified according to GHS criteria

Target Organ Systemic Toxicant - Single exposure
Not classified according to GHS criteria

Target Organ Systemic Toxicant - Repeated exposure
Not classified according to GHS criteria

Aspiration toxicity
Not classified according to GHS criteria

Numerical measures of toxicity (acute toxicity estimation (ATE),etc.)
No information available.

Symptoms related to the physical, chemical and toxicological characteristics
Exposure to component solvents vapours concentration in excess of the stated occupational exposure limit may result in adverse health effect such as mucous membrane and respiratory system irritation and adverse effect on kidney, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness. Through skin resorbtion, solvents can cause some of the effects described here. Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin resulting in non-allergic contact dermatitis and absorption through the skin. The liquid splashed in the eyes may cause irritation and reversible damage.

Whether the hazardous chemical is listed by NTP, IARC or OSHA

Titanium dioxide	IARC 2B

12. Ecological information

There are no data available on the product itself. The product should not be allowed to enter drains or watercourses. The product contains an organic linked halogen. It may contribute to the AOX-value.

13. Disposal considerations

Waste Disposal Method
Do not allow material to contaminate ground water systems. Incinerate or otherwise dispose of waste material in accordance with Federal, State, Provincial, and local requirements. Do not incinerate in closed containers.

14. Transport information

International transport regulations

IMDG (Sea transport)	
UN number:	1263
Proper shipping name:	PAINT

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Hazard Class:	3
Subsidiary Hazard Class:	Not applicable.
Packing group:	III
Marine Pollutant:	no

ICAO/IATA (Air transport)

UN number:	1263
Proper shipping name:	PAINT
Hazard Class:	3
Subsidiary Hazard Class:	Not applicable.
Packing group:	III

DOT

UN number:	1263
Proper shipping name:	PAINT
Hazard Class:	3
Subsidiary Hazard Class:	Not applicable.
Packing group:	III
Marine Pollutant:	no
EmS:	F-E,S-E

Matters needing attention for transportation
Confirm that there is no breakage, corrosion, or leakage from the container before shipping. Be sure to prevent damage to cargo by loading so as to avoid falling, dropping, or collapse. Ship in appropriate containers with denotation of the content in accordance with the relevant statutes and rules.

15. Regulatory information

TSCA Status
In compliance with TSCA Inventory requirements for commercial purposes.

DSL Status
Product is not DSL listed because one or more ingredients are not on the DSL inventory.

Photochemical Reactivity
Non-photochemically reactive

Regulatory information

		EPCRA					CERCLA	CAA
CAS #	Ingredient	302	TPQ	RQ	311 - 312	313	RQ(lbs)	HAP
No information available.	Acrylic polymer	N	NR	NR	NA	N	NR	N
69153-52-2	Polyester resin	N	NR	NR	NA	N	NR	N
67-64-1	Acetone	N	NR	NR	A,C,F	N	5,000	N
123-86-4	Butyl acetate	N	NR	NR	A,C,F	N	NR	N
141-78-6	Ethyl acetate	N	NR	NR	C,F	N	NR	N
110-43-0	Methyl amyl ketone	N	NR	NR	A,C,F	N	NR	N
No information available.	Acrylic resin	N	NR	NR	NA	N	NR	N
763-69-9	Ethyl 3-ethoxy propionate	N	NR	NR	NA	N	NR	N
67-63-0	Isopropyl alcohol	N	NR	NR	,A,C,F,N,R	N	NR	N
78-93-3	Methyl ethyl ketone	N	NR	NR	A,C,F	N	5,000	N
12001-26-2	Mica	N	NR	NR	,A,C,F,N,R	N	NR	N
1328-53-6	Phthalocyanine green	N	NR	NR	,A,C,F,N,R	N	NR	N
169276-18-0*	Synthetic resin	N	NR	NR	NA	N	NR	N
13463-67-7	Titanium dioxide	N	NR	NR	,A,C,F,N,R	N	NR	N

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Key:

EPCRA	Emergency Planning and Community Right-to-know Act (aka Title III, SARA)
302	Extremely hazardous substances
311/312 Categories	F = Fire Hazard R = Reactivity Hazard P = Pressure Related Hazard A = Acute Hazard C = Chronic Hazard
313 Information	Section 313 Supplier Notification - The chemicals listed above with a 'Y' in the 313 column are subject to reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know act of 1986 and of 40 CFR 372.
CERCLA	Comprehensive Emergency Response, Compensation and Liability Act of 1980.
HAP	Listed as a Clean Air Act Hazardous Air Pollutant.
TPQ	Threshold Planning Quantity.
RQ	Reportable Quantity
NA	not available
NR	not regulated

16. Other information

HMIS rating H: 2 F: 2 R: 0

Glossary of Terms:

ACGIH	American Conference of Governmental Industrial Hygienists.
IARC	International Agency for Research on Cancer.
NTP	National Toxicology Program.
OEL	Occupational Exposure Limit
OSHA	Occupational Safety and Health Administration.
STEL	Short term exposure limit.
TWA	Time-weighted average.
PNOR	Particles not otherwise regulated.
PNOC	Particles not otherwise classified.

NOTE: The list (above) of glossary terms may be modified.

Notice from Axalta Coating Systems
The document reflects information provided to Axalta Coating Systems by its suppliers. Information is accurate to the best of our knowledge and is subject to change as new data is received by Axalta Coating Systems. Persons receiving this information should make their own determination as to its suitability for their purposes prior to use. The information on this Material Safety Data Sheet relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process.
SDS prepared by:
Axalta Coating Systems Regulatory Affairs
Report version

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MMRX-02478

1. Identification of the substance/mixture and of the company/undertaking

Product name	Color Atlas Blue
Product code	CAS413 EW
Intended use	Coating for professional use

Axalta Coating Systems, LLC
Applied Corporate Center
50 Applied Card Way, Suite 300
US Glen Mills, PA 19342

Telephone	Product information	(855) 6-AXALTA
	Medical emergency	(855) 274-5698
	Transportation emergency	(800) 424-9300 (CHEMTREC)

2. Hazards identification

This preparation is hazardous per the following GHS criteria

GHS-Classification

Flammable liquids	Category 3
Serious eye damage/eye irritation	Category 2A

Endpoints which are ""not classified"", ""cannot classified"" and ""not applicable"" are not shown

GHS-Labelling

Hazard symbols	
Signal word	Warning
Hazard statements	Flammable liquid and vapour. Causes serious eye irritation.
Precautionary statements	Wear eye protection/ face protection. Ground/bond container and receiving equipment. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Keep container tightly closed. Take precautionary measures against static discharge. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Wear protective gloves/ eye protection/ face protection. If eye irritation persists: Get medical advice/ attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower. Store in a well-ventilated place. Keep cool. Dispose of contents/container in accordance with local regulations.

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Other hazards which do not result in classification
None known.

The following percentage of the mixture consists of ingredient(s) with unknown acute toxicity:
7.1 %

3. Composition/information on ingredients

Mixture of synthetic resins, pigments, and solvents

Components

CAS-No.	Chemical Name	Concentration	GHS Hazardous
No information available.	Acrylic polymer	20 - 30%	
69153-52-2	Polyester resin	10 - 20%	
67-64-1	Acetone	4 - 15%	√
123-86-4	Butyl acetate	4 - 15%	√
141-78-6	Ethyl acetate	4 - 15%	√
110-43-0	Methyl amyl ketone	4 - 15%	√
78-93-3	Methyl ethyl ketone	4 - 15%	√
No information available.	Acrylic resin	1 - 5%	
763-69-9	Ethyl 3-ethoxy propionate	1 - 4%	√
67-63-0	Isopropyl alcohol	1 - 4%	√
12001-26-2	Mica	1 - 5%	
147-14-8	Phthalocyanine blue pigment	1 - 5%	
169276-18-0*	Synthetic resin	1 - 5%	
13463-67-7	Titanium dioxide	1.6%	

OSHA Hazardous: Yes
* Assigned CAS No. - An official CAS No. does not exist. The CAS No. shown is for a similar chemical.

4. First aid measures

Eye contact
Remove contact lenses. Irrigate copiously with clean, fresh water for at least 15 minutes, holding the eyelids apart. Seek medical advice.

Skin contact
Do NOT use solvents or thinners. Take off all contaminated clothing immediately. Wash skin thoroughly with soap and water or use recognized skin cleanser. If skin irritation persists, call a physician.

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Inhalation
Avoid inhalation of vapour or mist. Move to fresh air in case of accidental inhalation of vapours. If breathing is irregular or stopped, administer artificial respiration. If unconscious place in recovery position and seek medical advice. If symptoms persist, call a physician.

Ingestion
If swallowed, seek medical advice immediately and show this container or label. Do NOT induce vomiting. Keep at rest.

Most important Symptoms/effects, acute and delayed

Inhalation
Ingestion
May result in gastrointestinal distress.

Skin or eye contact
May cause irritation or burning of the eyes. Repeated or prolonged liquid contact may cause skin irritation with discomfort and dermatitis.

Indication of immediate medical attention and special treatment needed if necessary
No data available on the product. See section 3 and 11 for hazardous ingredients found in the product.

5. Firefighting measures

Suitable extinguishing media
Extinguishing media which shall not be used for safety reasons
High volume water jet

Hazardous combustion products
CO, CO2, smoke, and oxides of any heavy metals that are reported in "Composition, Information on Ingredients" section.

Fire and Explosion Hazards
Combustible liquid. When heated above the flashpoint, emits vapors which, when mixed with air, will burn if an ignition source is present. Fine mist or sprays could ignite at temperatures below the flashpoint.

Special Protective Equipment and Fire Fighting Procedures
Full protective flameproof clothing should be worn as appropriate. Wear self contained breathing apparatus for fire fighting if necessary. In the event of fire, cool tanks with water spray. Do not allow run-off from fire fighting to enter public sewer systems or public waterways.

6. Accidental release measures

Procedures for cleaning up spills or leaks
Ventilate area. If heated above the flashpoint, remove sources of ignition. Prevent skin and eye contact and breathing of vapor. Wear a properly fitted air-purifying respirator with organic vapor cartridges (NIOSH approved TC-23C), eye protection, gloves and protective clothing. Confine, remove with inert absorbent, and dispose of properly.

Environmental precautions
Do not let product enter drains. Notify the respective authorities in accordance with local law in the case of contamination of rivers, lakes or waste water systems.

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7. Handling and storage

Precautions for safe handling
Observe label precautions. Keep away from heat, flame and other sources of ignition. When heated above its flash point, this must be handled as if it were a flammable liquid. Close container after each use. Do not transfer contents to bottles or unlabeled containers. Wash thoroughly after handling and before eating or smoking.
If material is a coating: do not sand, flame cut, braze or weld dry coating without a NIOSH approved air purifying respirator with particulate filters or appropriate ventilation, and gloves. Combustible dust clouds may be created where operations produce fine material (dust). Avoid formation of significant deposits of material as they may become airborne and form combustible dust clouds. Build up of fine material should be cleaned using gentle sweeping or vacuuming in accordance with best practices. Cleaning methods (e.g. compressed air) which can generate potentially combustible dust clouds should not be used.

Advice on protection against fire and explosion
Solvent vapours are heavier than air and may spread along floors. Vapors may form explosive mixtures with air and will burn when an ignition source is present. Always keep in containers of same material as the original one. Never use pressure to empty container: container is not a pressure vessel. The accumulation of contaminated rags may result in spontaneous combustion. Good housekeeping standards and regular safe removal of waste materials will minimize the risks of spontaneous combustion and other fire hazards.

Storage
Requirements for storage areas and containers
Observe label precautions. Store in a dry, well ventilated place away from sources of heat, ignition and direct sunlight. No smoking. Prevent unauthorized access. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Advice on common storage
Store separately from oxidizing agents and strongly alkaline and strongly acidic materials.

OSHA/NFPA Storage Classification: II

8. Exposure controls/personal protection

Engineering controls and work practices
Provide adequate ventilation. This should be achieved by a good general extraction and -if practically feasible- by the use of a local exhaust ventilation. If these are not sufficient to maintain concentrations of particulates and solvent vapour below the OEL, suitable respiratory protection must be worn.

National occupational exposure limits

CAS-No.	Chemical Name	Source	Time	Type	Value	Note
67-64-1	Acetone	ACGIH	15 min	STEL	750 ppm	
			8 hr	TWA	500 ppm	
		OSHA	8 hr	TWA	1,000 ppm	
		Dupont	8 & 12 hour	TWA	500 ppm	
123-86-4	Butyl acetate	ACGIH	15 min	STEL	200 ppm	
			8 hr	TWA	150 ppm	
		OSHA	8 hr	TWA	150 ppm	
141-78-6	Ethyl acetate	ACGIH	8 hr	TWA	400 ppm	
		OSHA	8 hr	TWA	400 ppm	
110-43-0	Methyl amyl ketone	ACGIH	8 hr	TWA	50 ppm	

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CAS-No.	Chemical Name	Source	Time	Type	Value	Note
		OSHA	8 hr	TWA	100 ppm	
78-93-3	Methyl ethyl ketone	ACGIH	15 min	STEL	300 ppm	
			8 hr	TWA	200 ppm	
		OSHA	8 hr	TWA	200 ppm	
		Dupont	15 min	TWA	300 ppm	
			8 & 12 hour	TWA	200 ppm	
12001-26-2	Mica	ACGIH	8 hr	TWA	3 mg/m3	Respirable Dust None None
		OSHA	8 hr	PEL	20 mppcf	None None None
			8 hr	TWA	3 mg/m3	Respirable Dust None None
147-14-8	Phthalocyanine blue pigment	ACGIH	8 hr	TWA	10 mg/m3	inhalable dust PNOC
			8 hr	TWA	3 mg/m3	respirable particulate PNOC
		OSHA		TWA	5 mg/m3	Respirable Dust PNOR
			8 hr	TWA	15 mg/m3	Total Dust PNOR
13463-67-7	Titanium dioxide	OSHA	8 hr	TWA	15 mg/m3	Total Dust
		Dupont	8 & 12 hour	TWA	10 mg/m3	Total Dust
			8 & 12 hour	TWA	5 mg/m3	Respirable Dust

** STEL = Short term exposure limit.
TWA = Time-weighted average.
PEL = Permissible Exposure Limit.

Protective equipment
Personal protective equipment should be worn to prevent contact with eyes, skin or clothing.

Respiratory protection
Do not breathe vapors or mists. Wear an appropriate, properly fitted NIOSH approved respirator during application and until all vapors and spray mists are exhausted unless air monitoring demonstrates vapor/mist levels are below applicable limits. If respirators are required, use a properly fitted air-purifying respirator with organic vapor cartridges (NIOSH approved TC-23C) and particulate filter (NIOSH TC-84A). In confined spaces, or in situations where continuous spray operations are typical, or if proper air-purifying respirator fit is not possible, wear a positive pressure, supplied-air respirator (NIOSH TC-19C). In all cases, follow respirator manufacturer's directions for respirator use.'

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Eye protection
Desirable in all industrial situations. Goggles are preferred to prevent eye irritation. If safety glasses are substituted, include splash guard or side shields.

Skin and body protection
Neoprene gloves and coveralls are recommended.

Hygiene measures
Wash skin thoroughly with soap and water or use recognized skin cleanser. Do NOT use solvents or thinners.

Environmental exposure controls
Do not let product enter drains. For ecological information, refer to Ecological Information Section 12.

9. Physical and chemical properties

Appearance

Form: liquid Colour:

Flash point	104 °F	
Ignition temperature	377 °C	
Lower Explosive Limit	1 %	
Upper Explosive Limit	12.8 %	
Evapouration rate	Slower than Ether	
Vapor pressure of principal solvent	34.7 hPa	
Water solubility	appreciable	
Vapor density of principal solvent (Air = 1)	3.9	
Approx. Boiling Range	78 °C	
Approx. Freezing Range	Not applicable.	
Gallon Weight (lbs/gal)	8.26	
Specific Gravity	0.99	
Percent Volatile By Volume	57.15%	
Percent Volatile By Weight	48.41%	
Percent Solids By Volume	42.86%	
Percent Solids By Weight	51.59%	
pH (waterborne systems only)	Not applicable.	
Partition coefficient: n-octanol/water	no data available	
Ignition temperature	377 °C	DIN 51794
Decomposition temperature		
Viscosity (23 °C)	Not applicable.	ISO 2431-1993
VOC* less exempt (lbs/gal)	3.7	
VOC* as packaged (lbs/gal)	3.3	

* VOC less exempt (theoretical) and VOC as packaged (theoretical) are based upon the VOC of the packaged material at the point of manufacture.

10. Stability and reactivity

Stability
Stable

Conditions to avoid
Stable under recommended storage conditions.

Materials to avoid
None reasonably foreseeable.

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Hazardous decomposition products
When exposed to high temperatures may produce hazardous decomposition products such as carbon monoxide and dioxide, smoke, oxides of nitrogen.

Hazardous Polymerization
Will not occur.

Sensitivity to Static Discharge
If heated above the flash point, solvent vapors in air may explode if static grounding and bonding is not used during transfer of this product.

Sensitivity to Mechanical Impact
None known.

11. Toxicological information

Information on likely routes of exposure

Inhalation
Ingestion
May result in gastrointestinal distress.

Skin or eye contact
May cause irritation or burning of the eyes. Repeated or prolonged liquid contact may cause skin irritation with discomfort and dermatitis.

Delayed and immediate effects and also chronic effects from short and long term exposure:

Acute oral toxicity
not hazardous

Acute dermal toxicity
not hazardous

Acute inhalation toxicity
not hazardous

% of unknown composition 7.1 %

Skin corrosion/irritation
Not classified according to GHS criteria

Serious eye damage/eye irritation

acetone	Category 2A
ethyl acetate	Category 2A
heptan-2-one	Category 2B
butanone	Category 2A
propan-2-ol	Category 2A

Respiratory sensitisation
Not classified according to GHS criteria

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Skin sensitisation
Not classified according to GHS criteria

Germ cell mutagenicity
Not classified according to GHS criteria

Carcinogenicity
Not classified according to GHS criteria

Toxicity for reproduction
Not classified according to GHS criteria

Target Organ Systemic Toxicant - Single exposure
Not classified according to GHS criteria

Target Organ Systemic Toxicant - Repeated exposure
Not classified according to GHS criteria

Aspiration toxicity
Not classified according to GHS criteria

Numerical measures of toxicity (acute toxicity estimation (ATE),etc.)
No information available.

Symptoms related to the physical, chemical and toxicological characteristics
Exposure to component solvents vapours concentration in excess of the stated occupational exposure limit may result in adverse health effect such as mucous membrane and respiratory system irritation and adverse effect on kidney, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness. Through skin resorbtion, solvents can cause some of the effects described here. Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin resulting in non-allergic contact dermatitis and absorption through the skin. The liquid splashed in the eyes may cause irritation and reversible damage.

Whether the hazardous chemical is listed by NTP, IARC or OSHA

Titanium dioxide	IARC 2B

12. Ecological information

There are no data available on the product itself. The product should not be allowed to enter drains or watercourses. The product contains an organic linked halogen. It may contribute to the AOX-value.

13. Disposal considerations

Waste Disposal Method
Do not allow material to contaminate ground water systems. Incinerate or otherwise dispose of waste material in accordance with Federal, State, Provincial, and local requirements. Do not incinerate in closed containers.

14. Transport information

International transport regulations

IMDG (Sea transport)	
UN number:	1263
Proper shipping name:	PAINT

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Hazard Class:	3
Subsidiary Hazard Class:	Not applicable.
Packing group:	III
Marine Pollutant:	no

ICAO/IATA (Air transport)

UN number:	1263
Proper shipping name:	PAINT
Hazard Class:	3
Subsidiary Hazard Class:	Not applicable.
Packing group:	III

DOT

UN number:	1263
Proper shipping name:	PAINT
Hazard Class:	3
Subsidiary Hazard Class:	Not applicable.
Packing group:	III
Marine Pollutant:	no
EmS:	F-E,S-E

Matters needing attention for transportation
Confirm that there is no breakage, corrosion, or leakage from the container before shipping. Be sure to prevent damage to cargo by loading so as to avoid falling, dropping, or collapse. Ship in appropriate containers with denotation of the content in accordance with the relevant statutes and rules.

15. Regulatory information

TSCA Status
In compliance with TSCA Inventory requirements for commercial purposes.

DSL Status
Product is not DSL listed because one or more ingredients are not on the DSL inventory.

Photochemical Reactivity
Non-photochemically reactive

Regulatory Information

		EPCRA					CERCLA	CAA
CAS #	Ingredient	302	TPQ	RQ	311 - 312	313	RQ(lbs)	HAP
No information available.	Acrylic polymer	N	NR	NR	NA	N	NR	N
69153-52-2	Polyester resin	N	NR	NR	NA	N	NR	N
67-64-1	Acetone	N	NR	NR	A,C,F	N	5,000	N
123-86-4	Butyl acetate	N	NR	NR	A,C,F	N	NR	N
141-78-6	Ethyl acetate	N	NR	NR	C,F	N	NR	N
110-43-0	Methyl amyl ketone	N	NR	NR	A,C,F	N	NR	N
78-93-3	Methyl ethyl ketone	N	NR	NR	A,C,F	N	5,000	N
No information available.	Acrylic resin	N	NR	NR	NA	N	NR	N
763-69-9	Ethyl 3-ethoxy propionate	N	NR	NR	NA	N	NR	N
67-63-0	Isopropyl alcohol	N	NR	NR	,A,C,F,N,R	N	NR	N
12001-26-2	Mica	N	NR	NR	,A,C,F,N,R	N	NR	N
147-14-8	Phthalocyanine blue pigment	N	NR	NR	,A,C,F,N,R	N	NR	N
169276-18-0*	Synthetic resin	N	NR	NR	NA	N	NR	N
13463-67-7	Titanium dioxide	N	NR	NR	,A,C,F,N,R	N	NR	N

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Key:

EPCRA	Emergency Planning and Community Right-to-know Act (aka Title III, SARA)
302	Extremely hazardous substances
311/312 Categories	F = Fire Hazard R = Reactivity Hazard P = Pressure Related Hazard A = Acute Hazard C = Chronic Hazard
313 Information	Section 313 Supplier Notification - The chemicals listed above with a 'Y' in the 313 column are subject to reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know act of 1986 and of 40 CFR 372.
CERCLA	Comprehensive Emergency Response, Compensation and Liability Act of 1980.
HAP	Listed as a Clean Air Act Hazardous Air Pollutant.
TPQ	Threshold Planning Quantity.
RQ	Reportable Quantity
NA	not available
NR	not regulated

16. Other information

HMIS rating H: 2 F: 2 R: 0

Glossary of Terms:

ACGIH	American Conference of Governmental Industrial Hygienists.
IARC	International Agency for Research on Cancer.
NTP	National Toxicology Program.
OEL	Occupational Exposure Limit
OSHA	Occupational Safety and Health Administration.
STEL	Short term exposure limit.
TWA	Time-weighted average.
PNOR	Particles not otherwise regulated.
PNOC	Particles not otherwise classified.

NOTE: The list (above) of glossary terms may be modified.

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SDS prepared by:
Axalta Coating Systems Regulatory Affairs
Report version

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1. Identification of the substance/mixture and of the company/undertaking

Product name	Medium Temperature Activator	
Product code	15305S™	120524
Intended use	Hardener for professional use	
	Axalta Coating Systems, LLC Applied Corporate Center 50 Applied Card Way, Suite 300 US Glen Mills, PA 19342	
Telephone	Product information Medical emergency Transportation emergency	(855) 6-AXALTA (855) 274-5698 (800) 424-9300 (CHEMTREC)

2. Hazards identification

This preparation is hazardous per the following GHS criteria

GHS-Classification

Flammable liquids	Category 2
Serious eye damage/eye irritation	Category 2A
Respiratory sensitisation	Category 1
Skin sensitisation	Category 1
Target Organ Systemic Toxicant - Single exposure	Category 3

Endpoints which are ""not classified"", ""cannot classified"" and ""not applicable"" are not shown

GHS-Labelling

Hazard symbols

Signal word: Danger

Hazard statements:
Highly flammable liquid and vapour.
Causes serious eye irritation.
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
May cause an allergic skin reaction.
May cause respiratory irritation.

Precautionary statements:
Contaminated work clothing should not be allowed out of the workplace.
Ground/bond container and receiving equipment.
In case of inadequate ventilation wear respiratory protection.
Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
Take precautionary measures against static discharge.
Use explosion-proof electrical/ventilating/lighting equipment.
Use only non-sparking tools.
Use only outdoors or in a well-ventilated area.
Wear protective gloves/protective clothing/eye protection/face protection.
Avoid breathing dust/ vapours/ spray.
IF exposed or if you feel unwell: Call a POISON CENTER or doctor/ physician.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
If experiencing respiratory symptoms: Call a POISON CENTER or doctor/ physician.
If eye irritation persists: Get medical advice/ attention.

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IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.
IF ON SKIN: Wash with plenty of soap and water.
If skin irritation or rash occurs: Get medical advice/ attention.
Specific treatment (see supplemental first aid instructions on this label).
Wash contaminated clothing before reuse.
Store in a well-ventilated place. Keep container tightly closed.
Store locked up.
Dispose of contents/container to .?.

Other hazards which do not result in classification
Contains isocyanates. See information supplied by the manufacturer.

The following percentage of the mixture consists of ingredient(s) with unknown acute toxicity:
0 %

3. Composition/information on ingredients

Mixture of synthetic resins and solvents

Components

CAS-No.	Chemical Name	Concentration
28182-81-2	Aliphatic polyisocyanate resin	
79-20-9	Methyl acetate	
108-83-8	Diisobutyl ketone	
110-43-0	Methyl amyl ketone	

Non-regulated ingredients 1 - 5%
OSHA Hazardous: Yes

4. First aid measures

Eye contact
Remove contact lenses. Irrigate copiously with clean, fresh water for at least 15 minutes, holding the eyelids apart. Seek medical advice.

Skin contact
Do NOT use solvents or thinners. Take off all contaminated clothing immediately. Wash skin thoroughly with soap and water or use recognized skin cleanser. If skin irritation persists, call a physician.

Inhalation
Avoid inhalation of vapour or mist. Move to fresh air in case of accidental inhalation of vapours. If breathing is irregular or stopped, administer artificial respiration. If unconscious place in recovery position and seek medical advice. If symptoms persist, call a physician.

Ingestion
If swallowed, seek medical advice immediately and show this container or label. Do NOT induce vomiting. Keep at rest.

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Most Important Symptoms/effects, acute and delayed

Inhalation
May cause nose and throat irritation. May cause nervous system depression characterized by the following progressive steps: headache, dizziness, nausea, staggering gait, confusion, unconsciousness. Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage. Exposure to isocyanates may cause respiratory sensitization. This effect may be permanent. Symptoms include an asthma-like reaction with shortness of breath, wheezing, cough or permanent lung sensitization. This effect may be delayed for several hours after exposure. Repeated overexposure to isocyanates may cause a decrease in lung function, which may be permanent. Individuals with lung or breathing problems or prior reactions to isocyanates must not be exposed to vapors or spray mist of this product.

Ingestion
May result in gastrointestinal distress.

Skin or eye contact
May cause irritation or burning of the eyes. Repeated or prolonged liquid contact may cause skin irritation with discomfort and dermatitis. Skin contact my cause skin sensitization.

Indication of immediate medical attention and special treatment needed if necessary
No data available on the product. See section 3 and 11 for hazardous ingredients found in the product.

5. Firefighting measures

Suitable extinguishing media
Universal aqueous film-forming foam, Carbon dioxide (CO2), Dry chemical

Extinguishing media which shall not be used for safety reasons
High volume water jet

Hazardous combustion products
CO, CO2, smoke, and oxides of any heavy metals that are reported in "Composition, Information on Ingredients" section.

Fire and Explosion Hazards
Flammable liquid. Vapor/air mixture will burn when an ignition source is present.

Special Protective Equipment and Fire Fighting Procedures
Full protective flameproof clothing should be worn as appropriate. Wear self contained breathing apparatus for fire fighting if necessary. In the event of fire, cool tanks with water spray. Do not allow run-off from fire fighting to enter public sewer systems or public waterways.

6. Accidental release measures

Procedures for cleaning up spills or leaks
Ventilate area. Remove sources of ignition. Do not breathe vapors. Do not get in eyes or on skin. Wear a positive-pressure, supplied-air respirator (NIOSH approved TC-19C), eye protection, gloves and protective clothing. Pour liquid decontamination solution over the spill and allow to sit at least 10 minutes. Typical decontamination solutions for isocyanate containing materials are: 20% Surfactant (Tergitol TM 10) and 80% Water OR 0-10% Ammonia, 2-5% Detergent and Water (balance) Confine and remove with inert absorbent. Pressure can be generated. Do not seal waste containers for 48 hours to allow C02 to vent. After 48 hours, material may be sealed and disposed of properly.

Environmental precautions
Do not let product enter drains. Notify the respective authorities in accordance with local law in the case of contamination of rivers, lakes or waste water systems.

7. Handling and storage

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Precautions for safe handling
Observe label precautions. Keep away from heat, sparks, flame, static discharge and other sources of ignition. VAPORS MAY CAUSE FLASH FIRE. Close container after each use. Ground containers when pouring. Do not transfer contents to bottles or unlabeled containers. Wash thoroughly after handling and before eating or smoking. Do not store above 120 deg F.
If material is a coating: do not sand, flame cut, braze or weld dry coating without a NIOSH approved air purifying respirator with particulate filters or appropriate ventilation, and gloves. Combustible dust clouds may be created where operations produce fine material (dust). Avoid formation of significant deposits of material as they may become airborne and form combustible dust clouds. Build up of fine material should be cleaned using gentle sweeping or vacuuming in accordance with best practices. Cleaning methods (e.g. compressed air) which can generate potentially combustible dust clouds should not be used.

Advice on protection against fire and explosion
Solvent vapours are heavier than air and may spread along floors. Vapors may form explosive mixtures with air and will burn when an ignition source is present. Always keep in containers of same material as the original one. Never use pressure to empty container: container is not a pressure vessel. The accumulation of contaminated rags may result in spontaneous combustion. Good housekeeping standards and regular safe removal of waste materials will minimize the risks of spontaneous combustion and other fire hazards.

Storage
Requirements for storage areas and containers
Observe label precautions. Store in a dry, well ventilated place away from sources of heat, ignition and direct sunlight. No smoking. Prevent unauthorized access. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Advice on common storage
Store separately from oxidizing agents, strongly alkaline and strongly acidic materials, amines, alcohols and water. Precautions should be taken to avoid exposure to atmospheric humidity or water. Evolution of CO2 in closed containers causes overpressure and produces a risk of bursting.

Additional information on storage conditions
Precautions should be taken to avoid exposure to atmospheric humidity or water. Humid air and/or water will produce carbon dioxide which will pressurize the container. Open drum carefully as content may be under pressure.

OSHA/NFPA Storage Classification: IB

8. Exposure controls/personal protection

Engineering controls and work practices
Provide adequate ventilation. Air-fed protective respiratory equipment must be worn by spray operator even when good ventilation is provided.

National occupational exposure limits

CAS-No.	Chemical Name	Source	Time	Type	Value	Note
28182-81-2	Aliphatic polyisocyanate resin	Supplier	8 hr	TWA	0.5 mg/m3	
79-20-9	Methyl acetate	ACGIH	15 min	STEL	250 ppm	
			8 hr	TWA	200 ppm	
		OSHA	8 hr	TWA	200 ppm	
108-83-8	Diisobutyl ketone	ACGIH	8 hr	TWA	25 ppm	
		OSHA	8 hr	TWA	50 ppm	
110-43-0	Methyl amyl ketone	ACGIH	8 hr	TWA	50 ppm	
		OSHA	8 hr	TWA	100 ppm	

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** TWA = Time-weighted average.
STEL = Short term exposure limit.

Protective equipment
Personal protective equipment should be worn to prevent contact with eyes, skin or clothing.

Respiratory protection
Do not breathe vapors or mists. Wear a positive-pressure, supplied air respirator (NIOSH approved TC-19C), while mixing activator with paint, during application and until all vapors and spray mists are exhausted. Follow respirator manufacturer s directions for respirator use. Do not permit anyone without protection in the painting area. Refer to the hardener/activator label instructions for further information. Individuals with history of lung or breathing problems or prior reaction to isocyanates should not use or be exposed to vapor or spray mist.

Eye protection
Desirable in all industrial situations. Goggles are preferred to prevent eye irritation. If safety glasses are substituted, include splash guard or side shields.

Skin and body protection
Neoprene gloves and coveralls are recommended.

Hygiene measures
Wash skin thoroughly with soap and water or use recognized skin cleanser. Do NOT use solvents or thinners.

Environmental exposure controls
Do not let product enter drains. For ecological information, refer to Ecological Information Section 12.

9. Physical and chemical properties

Appearance

Form: liquid Colour: clear

Flash point	25 °F	
Ignition temperature	345 °C	
Lower Explosive Limit	0.8 %	
Upper Explosive Limit	16 %	
Evapouration rate	Slower than Ether	
Vapor pressure of principal solvent	35.8 hPa	
Water solubility	appreciable	
Vapor density of principal solvent (Air = 1)	2.6	
Approx. Boiling Range	56 °C	
Approx. Freezing Range	Not applicable.	
Gallon Weight (lbs/gal)	8.72	
Specific Gravity	1.04	
Percent Volatile By Volume	41.06%	
Percent Volatile By Weight	34.00%	
Percent Solids By Volume	58.94%	
Percent Solids By Weight	66.00%	
pH (waterborne systems only)	No data available.	
Partition coefficient: n-octanol/water	no data available	
Ignition temperature	345 °C	DIN 51794
Decomposition temperature		
Viscosity (23 °C)	Not applicable.	ISO 2431-1993
VOC* less exempt (lbs/gal)	1.9	
VOC* as packaged (lbs/gal)	1.5	

* VOC less exempt (theoretical) and VOC as packaged (theoretical) are based upon the VOC of the packaged material at the point of manufacture.

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10. Stability and reactivity

Stability
Stable

Conditions to avoid
Stable under recommended storage conditions.

Materials to avoid
Keep away from oxidising agents and strongly acid or alkaline materials. Amines and alcohols cause exothermic reactions. Mixture reacts slowly with water resulting in evolution of CO2. Evolution of CO2 in closed containers causes overpressure and produces a risk of bursting.

Hazardous decomposition products
When exposed to high temperatures may produce hazardous decomposition products such as carbon monoxide and dioxide, smoke, oxides of nitrogen as well as hydrogen cyanide, amines, alcohols and water.

Hazardous Polymerization
Will not occur.

Sensitivity to Static Discharge
Solvent vapors in air may explode if static grounding and bonding is not used during transfer of this product.

Sensitivity to Mechanical Impact
None known.

11. Toxicological information

Information on likely routes of exposure

Inhalation
May cause nose and throat irritation. May cause nervous system depression characterized by the following progressive steps: headache, dizziness, nausea, staggering gait, confusion, unconsciousness. Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage. Exposure to isocyanates may cause respiratory sensitization. This effect may be permanent. Symptoms include an asthma-like reaction with shortness of breath, wheezing, cough or permanent lung sensitization. This effect may be delayed for several hours after exposure. Repeated overexposure to isocyanates may cause a decrease in lung function, which may be permanent. Individuals with lung or breathing problems or prior reactions to isocyanates must not be exposed to vapors or spray mist of this product.

Ingestion
May result in gastrointestinal distress.

Skin or eye contact
May cause irritation or burning of the eyes. Repeated or prolonged liquid contact may cause skin irritation with discomfort and dermatitis.

Delayed and immediate effects and also chronic effects from short and long term exposure:

Acute oral toxicity
not hazardous

Acute dermal toxicity
Not classified according to GHS criteria

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Acute inhalation toxicity
not hazardous

% of unknown composition 0 %

Skin corrosion/irritation
Not classified according to GHS criteria

Serious eye damage/eye irritation

methyl acetate	Category 1
2,6-dimethylheptan-4-one	Category 2A
heptan-2-one	Category 2B

Respiratory sensitisation

Hexamethylene diisocyanate, oligomers	Category 1

Skin sensitisation

Hexamethylene diisocyanate, oligomers	Category 1

Germ cell mutagenicity
Not classified according to GHS criteria

Carcinogenicity
Not classified according to GHS criteria

Toxicity for reproduction
Not classified according to GHS criteria

Target Organ Systemic Toxicant - Single exposure

- **Inhalation**

  airway sensitivity heptan-2-one

  Narcotic effects heptan-2-one

  Respiratory system 2,6-dimethylheptan-4-one, methyl acetate

- **Ingestion**

  Respiratory tract irritation heptan-2-one

  Narcotic effects heptan-2-one

Target Organ Systemic Toxicant - Repeated exposure
Not classified according to GHS criteria

Aspiration toxicity
Not classified according to GHS criteria

Numerical measures of toxicity (acute toxicity estimation (ATE),etc.)
No information available.

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Symptoms related to the physical, chemical and toxicological characteristics
Based on the properties of the isocyanate components and considering toxicological data on similar products, the following applies: This formulation may cause acute irritation and/or sensitization of the respiratory system leading to an asthmatic condition, wheeziness and a tightness of the chest. Sensitized persons may subsequently show asthmatic symptoms when exposed to atmospheric concentrations well below the OEL. Repeated exposure may lead to permanent respiratory disability. Exposure to component solvents vapours concentration in excess of the stated occupational exposure limit may result in adverse health effect such as mucous membrane and respiratory system irritation and adverse effect on kidney, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness. Through skin resorbtion, solvents can cause some of the effects described here. Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin resulting in non-allergic contact dermatitis and absorption through the skin. The liquid splashed in the eyes may cause irritation and reversible damage. Components of the product may be absorbed into the body through the skin.

Whether the hazardous chemical is listed by NTP, IARC or OSHA

12. Ecological information

There are no data available on the product itself. The product should not be allowed to enter drains or watercourses.

13. Disposal considerations

Waste Disposal Method
Do not allow material to contaminate ground water systems. Incinerate or otherwise dispose of waste material in accordance with Federal, State, Provincial, and local requirements. Do not incinerate in closed containers.

14. Transport information

International transport regulations

IMDG (Sea transport)	
UN number:	1263
Proper shipping name:	PAINT RELATED MATERIAL
Hazard Class:	3
Subsidiary Hazard Class:	Not applicable.
Packing group:	II
Marine Pollutant:	no
ICAO/IATA (Air transport)	
UN number:	1263
Proper shipping name:	PAINT RELATED MATERIAL
Hazard Class:	3
Subsidiary Hazard Class:	Not applicable.
Packing group:	II
DOT	
UN number:	1263
Proper shipping name:	PAINT RELATED MATERIAL
Hazard Class:	3
Subsidiary Hazard Class:	Not applicable.
Packing group:	II
Marine Pollutant:	no
EmS:	F-E,S-E

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Matters needing attention for transportation
Confirm that there is no breakage, corrosion, or leakage from the container before shipping. Be sure to prevent damage to cargo by loading so as to avoid falling, dropping, or collapse. Ship in appropriate containers with denotation of the content in accordance with the relevant statutes and rules.

15. Regulatory information

TSCA Status
In compliance with TSCA Inventory requirements for commercial purposes.

DSL Status
All components of the mixture are listed on the DSL.

Photochemical Reactivity
Photochemically reactive

Regulatory information

		EPCRA					CERCLA	CAA
CAS #	Ingredient	302	TPQ	RQ	311 - 312	313	RQ(lbs)	HAP
28182-81-2	Aliphatic polyisocyanate resin	N	NR	NR	A,C,R	N	NR	N
79-20-9	Methyl acetate	N	NR	NR	A,C	N	100	N
108-83-8	Diisobutyl ketone	N	NR	NR	C,F	N	NR	N
110-43-0	Methyl amyl ketone	N	NR	NR	A,C,F	N	NR	N

Key:

EPCRA	Emergency Planning and Community Right-to-know Act (aka Title III, SARA)
302	Extremely hazardous substances
311/312 Categories	F = Fire Hazard R = Reactivity Hazard P = Pressure Related Hazard A = Acute Hazard C = Chronic Hazard
313 Information	Section 313 Supplier Notification - The chemicals listed above with a 'Y' in the 313 column are subject to reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know act of 1986 and of 40 CFR 372.
CERCLA	Comprehensive Emergency Response, Compensation and Liability Act of 1980.
HAP	Listed as a Clean Air Act Hazardous Air Pollutant.
TPQ	Threshold Planning Quantity.
RQ	Reportable Quantity
NA	not available
NR	not regulated

16. Other information

HMIS rating H: 3 F: 3 R: 1

Glossary of Terms:

ACGIH	American Conference of Governmental Industrial Hygienists.
IARC	International Agency for Research on Cancer.
NTP	National Toxicology Program.
OEL	Occupational Exposure Limit
OSHA	Occupational Safety and Health Administration.

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STEL	Short term exposure limit.
TWA	Time-weighted average.
PNOR	Particles not otherwise regulated.
PNOC	Particles not otherwise classified.

NOTE: The list (above) of glossary terms may be modified.

Notice from Axalta Coating Systems
The document reflects information provided to Axalta Coating Systems by its suppliers. Information is accurate to the best of our knowledge and is subject to change as new data is received by Axalta Coating Systems. Persons receiving this information should make their own determination as to its suitability for their purposes prior to use. The information on this Material Safety Data Sheet relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process.
SDS prepared by:
Axalta Coating Systems Regulatory Affairs
Report version

Version	Changes
5.1	16

Revision Date: 2014-10-06

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1. Identification of the substance/mixture and of the company/undertaking

Product name	Accelerator	
Product code	189S™	030404
Intended use	Intermediate	
	Axalta Coating Systems, LLC Applied Corporate Center 50 Applied Card Way, Suite 300 US Glen Mills, PA 19342	
Telephone	Product information Medical emergency Transportation emergency	(855) 6-AXALTA (855) 274-5698 (800) 424-9300 (CHEMTREC)

2. Hazards identification

This preparation is hazardous per the following GHS criteria

GHS-Classification

Flammable liquids	Category 3
Acute oral toxicity	Category 4
Acute dermal toxicity	Category 3
Acute inhalation toxicity	Category 3
Toxicity for reproduction	Category 1B

Endpoints which are ""not classified"", ""cannot classified"" and ""not applicable"" are not shown

GHS-Labelling

Hazard symbols	
Signal word	Danger
Hazard statements	Flammable liquid and vapour. Harmful if swallowed. Toxic in contact with skin. Toxic if inhaled. May damage fertility or the unborn child.
Precautionary statements	Do not eat, drink or smoke when using this product. Ground/bond container and receiving equipment. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Obtain special instructions before use. Take precautionary measures against static discharge. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Use only outdoors or in a well-ventilated area. Wear protective gloves/ eye protection/ face protection. Wear protective gloves/ protective clothing. Avoid breathing dust/ vapours/ spray. IF INHALED: Remove person to fresh air and keep comfortable for breathing. IF exposed or concerned: Get medical advice/ attention. IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.

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IF ON SKIN: Wash with plenty of soap and water.
IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician.
Remove/Take off immediately all contaminated clothing.
Specific measures (see supplemental first aid instructions on this label).
Store in a well-ventilated place. Keep container tightly closed.
Store locked up.
Dispose of contents/container to .?.

Other hazards which do not result in classification
None known.

The following percentage of the mixture consists of ingredient(s) with unknown acute toxicity:
0 %

3. Composition/information on ingredients

Mixture of synthetic resins and solvents

Components

CAS-No.	Chemical Name	Concentration
123-54-6	2,4-pentanedione	

Non-regulated ingredients 0.1 - 1.0%
OSHA Hazardous: Yes

4. First aid measures

Eye contact
Remove contact lenses. Irrigate copiously with clean, fresh water for at least 15 minutes, holding the eyelids apart. Seek medical advice.

Skin contact
Do NOT use solvents or thinners. Take off all contaminated clothing immediately. Wash skin thoroughly with soap and water or use recognized skin cleanser. If skin irritation persists, call a physician.

Inhalation
Avoid inhalation of vapour or mist. Move to fresh air in case of accidental inhalation of vapours. If breathing is irregular or stopped, administer artificial respiration. If unconscious place in recovery position and seek medical advice. If symptoms persist, call a physician.

Ingestion
If swallowed, seek medical advice immediately and show this container or label. Do NOT induce vomiting. Keep at rest.

Most Important Symptoms/effects, acute and delayed

Inhalation
May cause nose and throat irritation. May cause nervous system depression characterized by the following progressive steps: headache, dizziness, nausea, staggering gait, confusion, unconsciousness. Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage. If this product mixed with an isocyanate activator/hardener (see MSDS for the activator), the following health effects may apply: Exposure to isocyanates may cause respiratory sensitization. This effect may be permanent. Symptoms include an asthma-like reaction with shortness of breath, wheezing, cough or permanent lung sensitization. This effect may be delayed for several hours after exposure. Repeated

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overexposure to isocyanates may cause a decrease in lung function, which may be permanent. Individuals with lung or breathing problems or prior reactions to isocyanates must not be exposed to vapors or spray mist of this product.

Ingestion
May result in gastrointestinal distress.

Skin or eye contact
May cause irritation or burning of the eyes. Repeated or prolonged liquid contact may cause skin irritation with discomfort and dermatitis. If this product is mixed with an isocyanate, skin contact may cause sensitization.

Indication of immediate medical attention and special treatment needed if necessary
No data available on the product. See section 3 and 11 for hazardous ingredients found in the product.

5. Firefighting measures

Suitable extinguishing media
Universal aqueous film-forming foam, Carbon dioxide (CO2), Dry chemical

Extinguishing media which shall not be used for safety reasons
High volume water jet

Hazardous combustion products
CO, CO2, smoke, and oxides of any heavy metals that are reported in "Composition, Information on Ingredients" section.

Fire and Explosion Hazards
Flammable liquid. Vapor/air mixture will burn when an ignition source is present.

Special Protective Equipment and Fire Fighting Procedures
Full protective flameproof clothing should be worn as appropriate. Wear self contained breathing apparatus for fire fighting if necessary. In the event of fire, cool tanks with water spray. Do not allow run-off from fire fighting to enter public sewer systems or public waterways.

6. Accidental release measures

Procedures for cleaning up spills or leaks
Ventilate area. Remove sources of ignition. Prevent skin and eye contact and breathing of vapor. If the material contains, or is mixed with an isocyanate activator/hardener: Wear a positive-pressure, supplied-air respirator (NIOSH approved TC-19C), eye protection, gloves and protective clothing. Pour liquid decontamination solution over the spill and allow to sit at least 10 minutes. Typical decontamination solutions for isocyanate containing materials are: 20% Surfactant (Tergitol TMN 10) and 80% Water OR 0 -10% Ammonia, 2-5% Detergent and Water (balance) Pressure can be generated. Do not seal waste containers for 48 hours to allow C02 to vent. After 48 hours, material may be sealed and disposed of properly. If material does not contain or is not mixed with an isocyanate activator/hardener: Wear a properly fitted air-purifying respirator with organic vapor cartridges (NIOSH approved TC-23C), eye protection, gloves and protective clothing. Confine, remove with inert absorbent, and dispose of properly.

Environmental precautions
Do not let product enter drains. Notify the respective authorities in accordance with local law in the case of contamination of rivers, lakes or waste water systems.

7. Handling and storage

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Precautions for safe handling
Observe label precautions. Keep away from heat, sparks, flame, static discharge and other sources of ignition. VAPORS MAY CAUSE FLASH FIRE. Close container after each use. Ground containers when pouring. Do not transfer contents to bottles or unlabeled containers. Wash thoroughly after handling and before eating or smoking. Do not store above 120 deg F.
If material is a coating: do not sand, flame cut, braze or weld dry coating without a NIOSH approved air purifying respirator with particulate filters or appropriate ventilation, and gloves. Combustible dust clouds may be created where operations produce fine material (dust). Avoid formation of significant deposits of material as they may become airborne and form combustible dust clouds. Build up of fine material should be cleaned using gentle sweeping or vacuuming in accordance with best practices. Cleaning methods (e.g. compressed air) which can generate potentially combustible dust clouds should not be used.

Advice on protection against fire and explosion
Solvent vapours are heavier than air and may spread along floors. Vapors may form explosive mixtures with air and will burn when an ignition source is present. Always keep in containers of same material as the original one. Never use pressure to empty container: container is not a pressure vessel. The accumulation of contaminated rags may result in spontaneous combustion. Good housekeeping standards and regular safe removal of waste materials will minimize the risks of spontaneous combustion and other fire hazards.

Storage
Requirements for storage areas and containers
Observe label precautions. Store in a dry, well ventilated place away from sources of heat, ignition and direct sunlight. No smoking. Prevent unauthorized access. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Advice on common storage
Store separately from oxidizing agents and strongly alkaline and strongly acidic materials.

OSHA/NFPA Storage Classification: IC

8. Exposure controls/personal protection

Engineering controls and work practices
Provide adequate ventilation. This should be achieved by a good general extraction and -if practically feasible- by the use of a local exhaust ventilation. If these are not sufficient to maintain concentrations of particulates and solvent vapour below the OEL, suitable respiratory protection must be worn.

National occupational exposure limits

CAS-No.	Chemical Name	Source	Time	Type	Value	Note
123-54-6	2,4-pentanedione	ACGIH	8 hr	TWA	25 ppm	Skin
		Dupont	8 & 12 hour	TWA	5 ppm	

** TWA = Time-weighted average.

Protective equipment
Personal protective equipment should be worn to prevent contact with eyes, skin or clothing.

Respiratory protection
Do not breathe vapors or mists. When this product is used with an isocyanate activator/hardener, wear a positive-pressure, supplied-air respirator (NIOSH approved TC-19C) while mixing activator/hardener with paint, during application and until all vapors and spray mist are exhausted. If product is used without isocyanate activator/hardener, a properly fitted air-purifying respirator with organic vapor cartridges (NIOSH TC-23C) and particulate filter (NIOSH TC-84A) may be used. Follow respirator manufacturer's directions for respirator use. Do not permit anyone without protection in the painting area. Refer to the hardener/activator label instructions and MSDS for further information. Individuals with history of lung or breathing problems or prior reaction to isocyanates should not use or be exposed to this product if mixed with isocyanate activators/hardeners.

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Eye protection
Desirable in all industrial situations. Goggles are preferred to prevent eye irritation. If safety glasses are substituted, include splash guard or side shields.

Skin and body protection
Neoprene gloves and coveralls are recommended.

Hygiene measures
Wash skin thoroughly with soap and water or use recognized skin cleanser. Do NOT use solvents or thinners.

Environmental exposure controls
Do not let product enter drains. For ecological information, refer to Ecological Information Section 12.

9. Physical and chemical properties

Appearance

Form: liquid Colour: clear Odour: Characteristic Paint Odor

Flash point	87 °F	
Ignition temperature	350 °C	
Lower Explosive Limit	1.7 %	
Upper Explosive Limit	11.6 %	
Evapouration rate	Slower than Ether	
Vapor pressure of principal solvent	9.0 hPa	
Water solubility	appreciable	
Vapor density of principal solvent (Air = 1)	3.5	
Approx. Boiling Range	135 °C	
Approx. Freezing Range	Not applicable.	
Gallon Weight (lbs/gal)	8.14	
Specific Gravity	0.98	
Percent Volatile By Volume	99.75%	
Percent Volatile By Weight	99.73%	
Percent Solids By Volume	0.25%	
Percent Solids By Weight	0.27%	
pH (waterborne systems only)	No data available.	
Partition coefficient: n-octanol/water	no data available	
Ignition temperature	350 °C	DIN 51794
Decomposition temperature		
Viscosity (23 °C)	Not applicable.	ISO 2431-1993
VOC* less exempt (lbs/gal)	8.1	
VOC* as packaged (lbs/gal)	8.1	

* VOC less exempt (theoretical) and VOC as packaged (theoretical) are based upon the VOC of the packaged material at the point of manufacture.

10. Stability and reactivity

Stability
Stable

Conditions to avoid
Stable under recommended storage conditions.

Materials to avoid
None reasonably foreseeable.

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Hazardous decomposition products
When exposed to high temperatures may produce hazardous decomposition products such as carbon monoxide and dioxide, smoke, oxides of nitrogen.

Hazardous Polymerization
Will not occur.

Sensitivity to Static Discharge
Solvent vapors in air may explode if static grounding and bonding is not used during transfer of this product.

Sensitivity to Mechanical Impact
None known.

11. Toxicological information

Information on likely routes of exposure

Inhalation
May cause nose and throat irritation. May cause nervous system depression characterized by the following progressive steps: headache, dizziness, nausea, staggering gait, confusion, unconsciousness. Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage. If this product mixed with an isocyanate activator/hardener (see MSDS for the activator), the following health effects may apply: Exposure to isocyanates may cause respiratory sensitization. This effect may be permanent. Symptoms include an asthma-like reaction with shortness of breath, wheezing, cough or permanent lung sensitization. This effect may be delayed for several hours after exposure. Repeated overexposure to isocyanates may cause a decrease in lung function, which may be permanent. Individuals with lung or breathing problems or prior reactions to isocyanates must not be exposed to vapors or spray mist of this product.

Ingestion
May result in gastrointestinal distress.

Skin or eye contact
May cause irritation or burning of the eyes. Repeated or prolonged liquid contact may cause skin irritation with discomfort and dermatitis.

Delayed and immediate effects and also chronic effects from short and long term exposure:

Acute oral toxicity

pentane-2,4-dione	Category 4

Acute dermal toxicity

pentane-2,4-dione	Category 3

Acute inhalation toxicity

pentane-2,4-dione	Category 3

% of unknown composition 0 %

Skin corrosion/irritation
Not classified according to GHS criteria

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Serious eye damage/eye irritation
Not classified according to GHS criteria

Respiratory sensitisation
Not classified according to GHS criteria

Skin sensitisation
not hazardous

Germ cell mutagenicity
Not classified according to GHS criteria

Carcinogenicity
Not classified according to GHS criteria

Toxicity for reproduction
No data available.

Target Organ Systemic Toxicant - Single exposure
not hazardous

Target Organ Systemic Toxicant - Repeated exposure
Not classified according to GHS criteria

Aspiration toxicity
Not classified according to GHS criteria

Numerical measures of toxicity (acute toxicity estimation (ATE),etc.)
No information available.

Symptoms related to the physical, chemical and toxicological characteristics
Exposure to component solvents vapours concentration in excess of the stated occupational exposure limit may result in adverse health effect such as mucous membrane and respiratory system irritation and adverse effect on kidney, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness. Through skin resorbtion, solvents can cause some of the effects described here. Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin resulting in non-allergic contact dermatitis and absorption through the skin. The liquid splashed in the eyes may cause irritation and reversible damage.

Whether the hazardous chemical is listed by NTP, IARC or OSHA

12. Ecological information

There are no data available on the product itself. The product should not be allowed to enter drains or watercourses.

13. Disposal considerations

Waste Disposal Method
Do not allow material to contaminate ground water systems. Incinerate or otherwise dispose of waste material in accordance with Federal, State, Provincial, and local requirements. Do not incinerate in closed containers.

14. Transport information

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International transport regulations

IMDG (Sea transport)

UN number:	1263
Proper shipping name:	PAINT RELATED MATERIAL
Hazard Class:	3
Subsidiary Hazard Class:	Not applicable.
Packing group:	III
Marine Pollutant:	no

ICAO/IATA (Air transport)

UN number:	1263
Proper shipping name:	PAINT RELATED MATERIAL
Hazard Class:	3
Subsidiary Hazard Class:	Not applicable.
Packing group:	III

DOT

UN number:	1263
Proper shipping name:	PAINT RELATED MATERIAL
Hazard Class:	3
Subsidiary Hazard Class:	Not applicable.
Packing group:	III
Marine Pollutant:	no
EmS:	F-E,S-E

Matters needing attention for transportation
Confirm that there is no breakage, corrosion, or leakage from the container before shipping. Be sure to prevent damage to cargo by loading so as to avoid falling, dropping, or collapse. Ship in appropriate containers with denotation of the content in accordance with the relevant statutes and rules.

15. Regulatory information

TSCA Status
In compliance with TSCA Inventory requirements for commercial purposes.

DSL Status
All components of the mixture are listed on the DSL.

Photochemical Reactivity
Non-photochemically reactive

Regulatory information

		EPCRA					CERCLA	CAA
CAS #	Ingredient	302	TPQ	RQ	311 - 312	313	RQ(lbs)	HAP
123-54-6	2,4-pentanedione	N	NR	NR	A,C,F	N	NR	N

Key:

EPCRA	Emergency Planning and Community Right-to-know Act (aka Title III, SARA)	
302	Extremely hazardous substances	
311/312 Categories	F = Fire Hazard	A = Acute Hazard
	R = Reactivity Hazard	C = Chronic Hazard

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	P = Pressure Related Hazard
313 Information	Section 313 Supplier Notification - The chemicals listed above with a 'Y' in the 313 column are subject to reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know act of 1986 and of 40 CFR 372.
CERCLA	Comprehensive Emergency Response, Compensation and Liability Act of 1980.
HAP	Listed as a Clean Air Act Hazardous Air Pollutant.
TPQ	Threshold Planning Quantity.
RQ	Reportable Quantity
NA	not available
NR	not regulated

16. Other Information

HMIS rating H: 2 F: 3 R: 0

Glossary of Terms:

ACGIH	American Conference of Governmental Industrial Hygienists.
IARC	International Agency for Research on Cancer.
NTP	National Toxicology Program.
OEL	Occupational Exposure Limit
OSHA	Occupational Safety and Health Administration.
STEL	Short term exposure limit.
TWA	Time-weighted average.
PNOR	Particles not otherwise regulated.
PNOC	Particles not otherwise classified.

NOTE: The list (above) of glossary terms may be modified.

Notice from Axalta Coating Systems
The document reflects information provided to Axalta Coating Systems by its suppliers. Information is accurate to the best of our knowledge and is subject to change as new data is received by Axalta Coating Systems. Persons receiving this information should make their own determination as to its suitability for their purposes prior to use. The information on this Material Safety Data Sheet relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process.
SDS prepared by:
Axalta Coating Systems Regulatory Affairs
Report version

Version	Changes
1.1	8, 12, 15, 16

Revision Date: 2014-10-06

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1. Identification of the substance/mixture and of the company/undertaking

Product name	POT LIFE EXTENDER	
Product code	89S	120314
Intended use	Intermediate	
	Axalta Coating Systems, LLC Applied Corporate Center 50 Applied Card Way, Suite 300 US Glen Mills, PA 19342	
Telephone	Product information Medical emergency Transportation emergency	(855) 6-AXALTA (855) 274-5698 (800) 424-9300 (CHEMTREC)

2. Hazards identification

The subtance is hazardous per the following GHS criteria.

GHS-Classification

Flammable liquids	Category 3
Acute oral toxicity	Category 4
Acute dermal toxicity	Category 3
Acute inhalation toxicity	Category 3

Endpoints which are ""not classified"", ""cannot classified"" and ""not applicable"" are not shown

GHS-Labelling

Hazard symbols	
Signal word	Danger
Hazard statements	Flammable liquid and vapour. Harmful if swallowed. Toxic in contact with skin. Toxic if inhaled.
Precautionary statements	Do not eat, drink or smoke when using this product. Ground/bond container and receiving equipment. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Take precautionary measures against static discharge. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Use only outdoors or in a well-ventilated area. Wear protective gloves/ eye protection/ face protection. Wear protective gloves/ protective clothing. Avoid breathing dust/ vapours/ spray. IF INHALED: Remove person to fresh air and keep comfortable for breathing. IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower. IF ON SKIN: Wash with plenty of soap and water. IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician. Remove/Take off immediately all contaminated clothing.

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Specific measures (see supplemental first aid instructions on this label).
Store in a well-ventilated place. Keep container tightly closed.
Store locked up.
Dispose of contents/container in accordance with local regulations.

Other hazards which do not result in classification
None known.

The following percentage of the mixture consists of ingredient(s) with unknown acute toxicity:
0 %

3. Composition/information on ingredients

Mixture of synthetic resins and solvents

Components

CAS-No.	Chemical Name	Concentration	GHS Hazardous
123-54-6	2,4-pentanedione	92 - 100%	√

OSHA Hazardous: Yes

4. First aid measures

Eye contact
Remove contact lenses. Irrigate copiously with clean, fresh water for at least 15 minutes, holding the eyelids apart. Seek medical advice.

Skin contact
Do NOT use solvents or thinners. Take off all contaminated clothing immediately. Wash skin thoroughly with soap and water or use recognized skin cleanser. If skin irritation persists, call a physician.

Inhalation
Avoid inhalation of vapour or mist. Move to fresh air in case of accidental inhalation of vapours. If breathing is irregular or stopped, administer artificial respiration. If unconscious place in recovery position and seek medical advice. If symptoms persist, call a physician.

Ingestion
If swallowed, seek medical advice immediately and show this container or label. Do NOT induce vomiting. Keep at rest.

Most Important Symptoms/effects, acute and delayed

Inhalation
May cause nose and throat irritation. May cause nervous system depression characterized by the following progressive steps: headache, dizziness, nausea, staggering gait, confusion, unconsciousness. Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage.

Ingestion
May result in gastrointestinal distress.

Skin or eye contact
May cause irritation or burning of the eyes. Repeated or prolonged liquid contact may cause skin irritation with discomfort and dermatitis.

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Indication of immediate medical attention and special treatment needed if necessary
No data available on the product. See section 3 and 11 for hazardous ingredients found in the product.

5. Firefighting measures

Suitable extinguishing media
Universal aqueous film-forming foam, Carbon dioxide (CO2), Dry chemical

Extinguishing media which shall not be used for safety reasons
High volume water jet

Hazardous combustion products
CO, CO2, smoke, and oxides of any heavy metals that are reported in "Composition, Information on Ingredients" section.

Fire and Explosion Hazards
Flammable liquid. Vapor/air mixture will burn when an ignition source is present.

Special Protective Equipment and Fire Fighting Procedures
Full protective flameproof clothing should be worn as appropriate. Wear self contained breathing apparatus for fire fighting if necessary. In the event of fire, cool tanks with water spray. Do not allow run-off from fire fighting to enter public sewer systems or public waterways.

6. Accidental release measures

Procedures for cleaning up spills or leaks
Ventilate area. Remove sources of ignition. Prevent skin and eye contact and breathing of vapor. Wear a properly fitted air-purifying respirator with organic vapor cartridges (NIOSH approved TC-23C), eye protection, gloves and protective clothing. Confine, remove with inert absorbent, and dispose of properly.

Environmental precautions
Do not let product enter drains. Notify the respective authorities in accordance with local law in the case of contamination of rivers, lakes or waste water systems.

7. Handling and storage

Precautions for safe handling
Observe label precautions. Keep away from heat, sparks, flame, static discharge and other sources of ignition. VAPORS MAY CAUSE FLASH FIRE. Close container after each use. Ground containers when pouring. Do not transfer contents to bottles or unlabeled containers. Wash thoroughly after handling and before eating or smoking. Do not store above 120 deg F.
If material is a coating: do not sand, flame cut, braze or weld dry coating without a NIOSH approved air purifying respirator with particulate filters or appropriate ventilation, and gloves. Combustible dust clouds may be created where operations produce fine material (dust). Avoid formation of significant deposits of material as they may become airborne and form combustible dust clouds. Build up of fine material should be cleaned using gentle sweeping or vacuuming in accordance with best practices. Cleaning methods (e.g. compressed air) which can generate potentially combustible dust clouds should not be used.

Advice on protection against fire and explosion
Solvent vapours are heavier than air and may spread along floors. Vapors may form explosive mixtures with air and will burn when an ignition source is present. Always keep in containers of same material as the original one. Never use pressure to empty container: container is not a pressure vessel. The accumulation of contaminated rags may result in spontaneous combustion. Good housekeeping standards and regular safe removal of waste materials will minimize the risks of spontaneous combustion and other fire hazards.

Storage

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Requirements for storage areas and containers
Observe label precautions. Store in a dry, well ventilated place away from sources of heat, ignition and direct sunlight. No smoking. Prevent unauthorized access. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Advice on common storage
Store separately from oxidizing agents and strongly alkaline and strongly acidic materials.

OSHA/NFPA Storage Classification: IC

8. Exposure controls/personal protection

Engineering controls and work practices
Provide adequate ventilation. This should be achieved by a good general extraction and -if practically feasible- by the use of a local exhaust ventilation. If these are not sufficient to maintain concentrations of particulates and solvent vapour below the OEL, suitable respiratory protection must be worn.

National occupational exposure limits

CAS-No.	Chemical Name	Source	Time	Type	Value	Note
123-54-6	2,4-pentanedione	ACGIH	8 hr	TWA	25 ppm	Skin
		Dupont	8 & 12 hour	TWA	5 ppm	

** TWA = Time-weighted average.

Protective equipment
Personal protective equipment should be worn to prevent contact with eyes, skin or clothing.

Respiratory protection
Do not breathe vapors or mists. If respirator is required to meet applicable exposure limits, use a NIOSH approved respirator in accordance with regulatory requirements (in the US follow OSHA standard 20CFR1910.134) and the respirator manufacturer's directions. If material contains an isocyanate or is used with an isocyanate, wear a positive-pressure, supplied-air respirator (NIOSH approved TC-19C.) Do not breathe vapors or mists. Wear an appropriate, properly fitted NIOSH approved respirator during application and until all vapors and spray mists are exhausted unless air monitoring demonstrates vapor/mist levels are below applicable limits. If respirators are required, use a properly fitted air-purifying respirator with organic vapor cartridges (NIOSH approved TC-23C) and particulate filter (NIOSH TC-84A). In confined spaces, or in situations where continuous spray operations are typical, or if proper air-purifying respirator fit is not possible, wear a positive pressure, supplied-air respirator (NIOSH TC-19C). In all cases, follow respirator manufacturer's directions for respirator use.'

Eye protection
Desirable in all industrial situations. Goggles are preferred to prevent eye irritation. If safety glasses are substituted, include splash guard or side shields.

Skin and body protection
Neoprene gloves and coveralls are recommended.

Hygiene measures
Wash skin thoroughly with soap and water or use recognized skin cleanser. Do NOT use solvents or thinners.

Environmental exposure controls
Do not let product enter drains. For ecological information, refer to Ecological Information Section 12.

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9. Physical and chemical properties

Appearance

Form: liquid Colour: clear

Flash point	75 °F	
Ignition temperature	350 °C	
Lower Explosive Limit	1.7 %	
Upper Explosive Limit	11.6 %	
Evapouration rate	Slower than Ether	
Vapor pressure of principal solvent	9.0 hPa	
Water solubility	appreciable	
Vapor density of principal solvent (Air = 1)	3.5	
Approx. Boiling Range	135 °C	
Approx. Freezing Range	Not applicable.	
Gallon Weight (lbs/gal)	8.14	
Specific Gravity	0.98	
Percent Volatile By Volume	100.00%	
Percent Volatile By Weight	100.00%	
Percent Solids By Volume	0.00%	
Percent Solids By Weight	0.00%	
pH (waterborne systems only)	No data available.	
Partition coefficient: n-octanol/water	no data available	
Ignition temperature	350 °C	DIN 51794
Decomposition temperature		
Viscosity (23 °C)	Not applicable.	ISO 2431-1993
VOC* less exempt (lbs/gal)	8.1	
VOC* as packaged (lbs/gal)	8.1	

* VOC less exempt (theoretical) and VOC as packaged (theoretical) are based upon the VOC of the packaged material at the point of manufacture.

10. Stability and reactivity

Stability
Stable

Conditions to avoid
Stable under recommended storage conditions.

Materials to avoid
None reasonably foreseeable.

Hazardous decomposition products
When exposed to high temperatures may produce hazardous decomposition products such as carbon monoxide and dioxide, smoke, oxides of nitrogen.

Hazardous Polymerization
Will not occur.

Sensitivity to Static Discharge
Solvent vapors in air may explode if static grounding and bonding is not used during transfer of this product.

Sensitivity to Mechanical Impact
None known.

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11. Toxicological information

Information on likely routes of exposure

Inhalation
May cause nose and throat irritation. May cause nervous system depression characterized by the following progressive steps: headache, dizziness, nausea, staggering gait, confusion, unconsciousness. Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage.

Ingestion
May result in gastrointestinal distress.

Skin or eye contact
May cause irritation or burning of the eyes. Repeated or prolonged liquid contact may cause skin irritation with discomfort and dermatitis.

Delayed and immediate effects and also chronic effects from short and long term exposure:

Acute oral toxicity

pentane-2,4-dione	Category 4

Acute dermal toxicity

pentane-2,4-dione	Category 3

Acute inhalation toxicity

pentane-2,4-dione	Category 3

% of unknown composition 0 %

Skin corrosion/irritation
not hazardous

Serious eye damage/eye irritation
not hazardous

Respiratory sensitisation
Not classified according to GHS criteria

Skin sensitisation
not hazardous

Germ cell mutagenicity
not hazardous

Carcinogenicity
Not classified according to GHS criteria

Toxicity for reproduction
Not classified according to GHS criteria

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Target Organ Systemic Toxicant - Single exposure
not hazardous

Target Organ Systemic Toxicant - Repeated exposure
not hazardous

Aspiration toxicity
Not classified according to GHS criteria

Numerical measures of toxicity (acute toxicity estimation (ATE),etc.)
No information available.

Symptoms related to the physical, chemical and toxicological characteristics
Exposure to component solvents vapours concentration in excess of the stated occupational exposure limit may result in adverse health effect such as mucous membrane and respiratory system irritation and adverse effect on kidney, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness. Through skin resorbtion, solvents can cause some of the effects described here. Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin resulting in non-allergic contact dermatitis and absorption through the skin. The liquid splashed in the eyes may cause irritation and reversible damage.

Whether the hazardous chemical is listed by NTP, IARC or OSHA

12. Ecological information

There are no data available on the product itself. The product should not be allowed to enter drains or watercourses.

13. Disposal considerations

Waste Disposal Method
Do not allow material to contaminate ground water systems. Incinerate or otherwise dispose of waste material in accordance with Federal, State, Provincial, and local requirements. Do not incinerate in closed containers.

14. Transport information

International transport regulations

IMDG (Sea transport)	
UN number:	2310
Proper shipping name:	PENTANE-2,4-DIONE
Hazard Class:	3
Subsidiary Hazard Class:	6.1
Packing group:	III
Marine Pollutant:	no
ICAO/IATA (Air transport)	
UN number:	2310
Proper shipping name:	PENTANE-2,4-DIONE
Hazard Class:	3
Subsidiary Hazard Class:	6.1
Packing group:	III
DOT	
UN number:	2310

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Proper shipping name:	PENTANE-2,4-DIONE
Hazard Class:	3
Subsidiary Hazard Class:	6.1
Packing group:	III
Marine Pollutant:	no
EmS:	F-E,S-D

Matters needing attention for transportation
Confirm that there is no breakage, corrosion, or leakage from the container before shipping. Be sure to prevent damage to cargo by loading so as to avoid falling, dropping, or collapse. Ship in appropriate containers with denotation of the content in accordance with the relevant statutes and rules.

15. Regulatory information

TSCA Status
In compliance with TSCA Inventory requirements for commercial purposes.

DSL Status
All components of the mixture are listed on the DSL.

Photochemical Reactivity
Non-photochemically reactive

Regulatory information

		EPCRA					CERCLA	CAA
CAS #	Ingredient	302	TPQ	RQ	311 - 312	313	RQ(lbs)	HAP
123-54-6	2,4-pentanedione	N	NR	NR	A,C,F	N	NR	N

Key:

EPCRA	Emergency Planning and Community Right-to-know Act (aka Title III, SARA)
302	Extremely hazardous substances
311/312 Categories	F = Fire Hazard R = Reactivity Hazard P = Pressure Related Hazard A = Acute Hazard C = Chronic Hazard
313 Information	Section 313 Supplier Notification - The chemicals listed above with a 'Y' in the 313 column are subject to reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know act of 1986 and of 40 CFR 372.
CERCLA	Comprehensive Emergency Response, Compensation and Liability Act of 1980.
HAP	Listed as a Clean Air Act Hazardous Air Pollutant.
TPQ	Threshold Planning Quantity.
RQ	Reportable Quantity
NA	not available
NR	not regulated

16. Other information

HMIS rating H: 2 F: 2 R: 0

Glossary of Terms:

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ACGIH	American Conference of Governmental Industrial Hygienists.
IARC	International Agency for Research on Cancer.
NTP	National Toxicology Program.
OEL	Occupational Exposure Limit
OSHA	Occupational Safety and Health Administration.
STEL	Short term exposure limit.
TWA	Time-weighted average.
PNOR	Particles not otherwise regulated.
PNOC	Particles not otherwise classified.

NOTE: The list (above) of glossary terms may be modified.

Notice from Axalta Coating Systems
The document reflects information provided to Axalta Coating Systems by its suppliers. Information is accurate to the best of our knowledge and is subject to change as new data is received by Axalta Coating Systems. Persons receiving this information should make their own determination as to its suitability for their purposes prior to use. The information on this Material Safety Data Sheet relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process.
SDS prepared by:
Axalta Coating Systems Regulatory Affairs
Report version

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1. Identification of the substance/mixture and of the company/undertaking

Product name	IMRON ELITE APPEARANCE CLEARCOAT	
Product code	8430S	
Intended use	Coating for professional use	
	Axalta Coating Systems, LLC Applied Corporate Center 50 Applied Card Way Suite 300 US Glen Mills PA 19342	
Telephone	Product information	(855) 6-AXALTA
	Medical emergency	(855) 274-5698
	Transportation emergency	(800) 424-9300 (CHEMTREC)

2. Hazards identification

This preparation is hazardous per the following GHS criteria

GHS-Classification

Flammable liquids	Category 3
Serious eye damage/eye irritation	Category 2A
Skin sensitisation	Category 1

Endpoints which are ""not classified"", ""cannot classified"" and ""not applicable"" are not shown

GHS-Labelling

Hazard symbols	
Signal word	Warning
Hazard statements	Flammable liquid and vapour. Causes serious eye irritation. May cause an allergic skin reaction.
Precautionary statements	Contaminated work clothing should not be allowed out of the workplace. Ground/bond container and receiving equipment. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Keep container tightly closed. Take precautionary measures against static discharge. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Wear protective gloves/protective clothing/eye protection/face protection. Avoid breathing dust/ vapours/ spray. If eye irritation persists: Get medical advice/ attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower. IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/ attention. Specific treatment (see supplemental first aid instructions on this label). Wash contaminated clothing before reuse.

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Store in a well-ventilated place. Keep cool.
Dispose of contents/container to .?.

Other hazards which do not result in classification
May produce an allergic reaction.

The following percentage of the mixture consists of ingredient(s) with unknown acute toxicity:
0 %

3. Composition/information on ingredients

Mixture of synthetic resins and solvents

Components

CAS-No.	Chemical Name	Concentration	GHS Hazardous
125128-40-7*	Acrylic resin	20 - 30%	
110-43-0	Methyl amyl ketone	15 - 26%	√
No information available.	Acrylic polymer	10 - 20%	
67-64-1	Acetone	4 - 15%	√
123-86-4	Butyl acetate	4 - 15%	√
110-12-3	Methyl isoamyl ketone	4 - 15%	√
624-54-4	N-pentyl propionate	4 - 15%	√
141-78-6	Ethyl acetate	1 - 4%	√
129922-22-1	Polyester resin	1 - 5%	
169276-18-0*	Synthetic resin	1 - 5%	

OSHA Hazardous: Yes
* Assigned CAS No. - An official CAS No. does not exist. The CAS No. shown is for a similar chemical.

4. First aid measures

Eye contact
Remove contact lenses. Irrigate copiously with clean, fresh water for at least 15 minutes, holding the eyelids apart. Seek medical advice.

Skin contact
Do NOT use solvents or thinners. Take off all contaminated clothing immediately. Wash skin thoroughly with soap and water or use recognized skin cleanser. If skin irritation persists, call a physician.

Inhalation
Avoid inhalation of vapour or mist. Move to fresh air in case of accidental inhalation of vapours. If breathing is irregular or stopped, administer artificial respiration. If unconscious place in recovery position and seek medical advice. If symptoms persist, call a physician.

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Ingestion
If swallowed, seek medical advice immediately and show this container or label. Do NOT induce vomiting. Keep at rest.

Most Important Symptoms/effects, acute and delayed

Inhalation
Ingestion
May result in gastrointestinal distress.

Skin or eye contact
May cause irritation or burning of the eyes. Repeated or prolonged liquid contact may cause skin irritation with discomfort and dermatitis.

Indication of immediate medical attention and special treatment needed if necessary
No data available on the product. See section 3 and 11 for hazardous ingredients found in the product.

5. Firefighting measures

Suitable extinguishing media
Extinguishing media which shall not be used for safety reasons
High volume water jet

Hazardous combustion products
CO, CO2, smoke, and oxides of any heavy metals that are reported in "Composition, Information on Ingredients" section.

Fire and Explosion Hazards
Combustible liquid. When heated above the flashpoint, emits vapors which, when mixed with air, will burn if an ignition source is present. Fine mist or sprays could ignite at temperatures below the flashpoint.

Special Protective Equipment and Fire Fighting Procedures
Full protective flameproof clothing should be worn as appropriate. Wear self contained breathing apparatus for fire fighting if necessary. In the event of fire, cool tanks with water spray. Do not allow run-off from fire fighting to enter public sewer systems or public waterways.

6. Accidental release measures

Procedures for cleaning up spills or leaks
Ventilate area. If heated above the flashpoint, remove sources of ignition. Prevent skin and eye contact and breathing of vapor. Wear a properly fitted air-purifying respirator with organic vapor cartridges (NIOSH approved TC-23C), eye protection, gloves and protective clothing. Confine, remove with inert absorbent, and dispose of properly.

Environmental precautions
Do not let product enter drains. Notify the respective authorities in accordance with local law in the case of contamination of rivers, lakes or waste water systems.

7. Handling and storage

Precautions for safe handling
Observe label precautions. Keep away from heat, flame and other sources of ignition. When heated above its flash point, this must be handled as if it were a flammable liquid. Close container after each use. Do not transfer contents to bottles or unlabeled containers. Wash thoroughly after handling and before eating or smoking.
If material is a coating: do not sand, flame cut, braze or weld dry coating without a NIOSH approved air purifying respirator with particulate filters or appropriate ventilation, and gloves. Combustible dust clouds may be created where operations produce fine material (dust). Avoid formation of significant deposits of material as they may become airborne and form combustible dust clouds. Build up of fine material should be cleaned using gentle sweeping or vacuuming in accordance with best practices. Cleaning methods (e.g. compressed air) which can generate potentially combustible dust clouds should not be used.

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Advice on protection against fire and explosion
Solvent vapours are heavier than air and may spread along floors. Vapors may form explosive mixtures with air and will burn when an ignition source is present. Always keep in containers of same material as the original one. Never use pressure to empty container: container is not a pressure vessel. The accumulation of contaminated rags may result in spontaneous combustion. Good housekeeping standards and regular safe removal of waste materials will minimize the risks of spontaneous combustion and other fire hazards.

Storage
Requirements for storage areas and containers
Observe label precautions. Store in a dry, well ventilated place away from sources of heat, ignition and direct sunlight. No smoking. Prevent unauthorized access. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Advice on common storage
Store separately from oxidizing agents and strongly alkaline and strongly acidic materials.

OSHA/NFPA Storage Classification: II

8. Exposure controls/personal protection

Engineering controls and work practices
Provide adequate ventilation. This should be achieved by a good general extraction and -if practically feasible- by the use of a local exhaust ventilation. If these are not sufficient to maintain concentrations of particulates and solvent vapour below the OEL, suitable respiratory protection must be worn.

National occupational exposure limits

CAS-No.	Chemical Name	Source	Time	Type	Value	Note
110-43-0	Methyl amyl ketone	ACGIH	8 hr	TWA	50 ppm	
		OSHA	8 hr	TWA	100 ppm	
67-64-1	Acetone	ACGIH	15 min	STEL	750 ppm	
			8 hr	TWA	500 ppm	
		OSHA	8 hr	TWA	1,000 ppm	
		Dupont	8 & 12 hour	TWA	500 ppm	
123-86-4	Butyl acetate	ACGIH	15 min	STEL	200 ppm	
			8 hr	TWA	150 ppm	
		OSHA	8 hr	TWA	150 ppm	
110-12-3	Methyl isoamyl ketone	ACGIH	8 hr	TWA	20 ppm	
141-78-6	Ethyl acetate	ACGIH	8 hr	TWA	400 ppm	
		OSHA	8 hr	TWA	400 ppm	

** TWA = Time-weighted average.
STEL = Short term exposure limit.

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Protective equipment
Personal protective equipment should be worn to prevent contact with eyes, skin or clothing.

Respiratory protection
Do not breathe vapors or mists. Wear an appropriate, properly fitted NIOSH approved respirator during application and until all vapors and spray mists are exhausted unless air monitoring demonstrates vapor/mist levels are below applicable limits. If respirators are required, use a properly fitted air-purifying respirator with organic vapor cartridges (NIOSH approved TC-23C) and particulate filter (NIOSH TC-84A). In confined spaces, or in situations where continuous spray operations are typical, or if proper air-purifying respirator fit is not possible, wear a positive pressure, supplied-air respirator (NIOSH TC-19C). In all cases, follow respirator manufacturer's directions for respirator use.'

Eye protection
Desirable in all industrial situations. Goggles are preferred to prevent eye irritation. If safety glasses are substituted, include splash guard or side shields.

Skin and body protection
Neoprene gloves and coveralls are recommended.

Hygiene measures
Wash skin thoroughly with soap and water or use recognized skin cleanser. Do NOT use solvents or thinners.

Environmental exposure controls
Do not let product enter drains. For ecological information, refer to Ecological Information Section 12.

9. Physical and chemical properties

Appearance

Form: liquid Colour:

Flash point	104 °F	
Ignition temperature	375 °C	
Lower Explosive Limit	1 %	
Upper Explosive Limit	12.8 %	
Evapouration rate	Slower than Ether	
Vapor pressure of principal solvent	23.6 hPa	
Water solubility	moderate	
Vapor density of principal solvent (Air = 1)	3.9	
Approx. Boiling Range	144 °C	
Approx. Freezing Range	Not applicable.	
Gallon Weight (lbs/gal)	7.99	
Specific Gravity	0.96	
Percent Volatile By Volume	57.81%	
Percent Volatile By Weight	50.11%	
Percent Solids By Volume	42.19%	
Percent Solids By Weight	49.90%	
pH (waterborne systems only)	Not applicable.	
Partition coefficient: n-octanol/water	no data available	
Ignition temperature	375 °C	DIN 51794
Decomposition temperature		
Viscosity (23 °C)	Not applicable.	ISO 2431-1993
VOC* less exempt (lbs/gal)	3.7	
VOC* as packaged (lbs/gal)	3.4	

* VOC less exempt (theoretical) and VOC as packaged (theoretical) are based upon the VOC of the packaged material at the point of manufacture.

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10. Stability and reactivity

Stability
Stable

Conditions to avoid
Stable under recommended storage conditions.

Materials to avoid
None reasonably foreseeable.

Hazardous decomposition products
When exposed to high temperatures may produce hazardous decomposition products such as carbon monoxide and dioxide, smoke, oxides of nitrogen.

Hazardous Polymerization
Will not occur.

Sensitivity to Static Discharge
If heated above the flash point, solvent vapors in air may explode if static grounding and bonding is not used during transfer of this product.

Sensitivity to Mechanical Impact
None known.

11. Toxicological information

Information on likely routes of exposure

Inhalation
Ingestion
May result in gastrointestinal distress.

Skin or eye contact
May cause irritation or burning of the eyes. Repeated or prolonged liquid contact may cause skin irritation with discomfort and dermatitis.

Delayed and immediate effects and also chronic effects from short and long term exposure:

Acute oral toxicity
not hazardous

Acute dermal toxicity
not hazardous

Acute inhalation toxicity
Not classified according to GHS criteria

% of unknown composition 0 %

Skin corrosion/irritation
Not classified according to GHS criteria

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Serious eye damage/eye irritation

heptan-2-one	Category 2B
acetone	Category 2A
5-methylhexan-2-one	Category 2A
ethyl acetate	Category 2A

Respiratory sensitisation
Not classified according to GHS criteria

Skin sensitisation
No data available.

Germ cell mutagenicity
Not classified according to GHS criteria

Carcinogenicity
Not classified according to GHS criteria

Toxicity for reproduction
Not classified according to GHS criteria

Target Organ Systemic Toxicant - Single exposure
Not classified according to GHS criteria

Target Organ Systemic Toxicant - Repeated exposure
Not classified according to GHS criteria

Aspiration toxicity
Not classified according to GHS criteria

Numerical measures of toxicity (acute toxicity estimation (ATE),etc.)
No information available.

Symptoms related to the physical, chemical and toxicological characteristics
Exposure to component solvents vapours concentration in excess of the stated occupational exposure limit may result in adverse health effect such as mucous membrane and respiratory system irritation and adverse effect on kidney, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness. Through skin resorbtion, solvents can cause some of the effects described here. Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin resulting in non-allergic contact dermatitis and absorption through the skin. The liquid splashed in the eyes may cause irritation and reversible damage.

Whether the hazardous chemical is listed by NTP, IARC or OSHA

12. Ecological information

There are no data available on the product itself. The product should not be allowed to enter drains or watercourses.

13. Disposal considerations

Waste Disposal Method
Do not allow material to contaminate ground water systems. Incinerate or otherwise dispose of waste material in accordance with Federal, State, Provincial, and local requirements. Do not incinerate in closed containers.

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14. Transport information

International transport regulations

IMDG (Sea transport)

UN number:	1263
Proper shipping name:	PAINT
Hazard Class:	3
Subsidiary Hazard Class:	Not applicable.
Packing group:	III
Marine Pollutant:	no

ICAO/IATA (Air transport)

UN number:	1263
Proper shipping name:	PAINT
Hazard Class:	3
Subsidiary Hazard Class:	Not applicable.
Packing group:	III

DOT

UN number:	1263
Proper shipping name:	PAINT
Hazard Class:	3
Subsidiary Hazard Class:	Not applicable.
Packing group:	III
Marine Pollutant:	no
EmS:	F-E,S-E

Matters needing attention for transportation
Confirm that there is no breakage, corrosion, or leakage from the container before shipping. Be sure to prevent damage to cargo by loading so as to avoid falling, dropping, or collapse. Ship in appropriate containers with denotation of the content in accordance with the relevant statutes and rules.

15. Regulatory information

TSCA Status
In compliance with TSCA Inventory requirements for commercial purposes.

DSL Status
All components of the mixture are listed on the DSL.

Photochemical Reactivity
Non-photochemically reactive

Regulatory information

		EPCRA					CERCLA	CAA
CAS #	Ingredient	302	TPQ	RQ	311 - 312	313	RQ(lbs)	HAP
125128-40-7*	Acrylic resin	N	NR	NR	NA	N	NR	N
110-43-0	Methyl amyl ketone	N	NR	NR	A,C,F	N	NR	N
No information available.	Acrylic polymer	N	NR	NR	NA	N	NR	N
67-64-1	Acetone	N	NR	NR	A,C,F	N	5,000	N
123-86-4	Butyl acetate	N	NR	NR	A,C,F	N	NR	N
110-12-3	Methyl isoamyl ketone	N	NR	NR	C	N	NR	N
624-54-4	N-pentyl propionate	N	NR	NR	NA	N	NR	N

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CAS #	Ingredient	EPCRA 302	EPCRA TPQ	EPCRA RQ	EPCRA 311 - 312	EPCRA 313	CERCLA RQ(lbs)	CAA HAP
141-78-6	Ethyl acetate	N	NR	NR	C,F	N	NR	N
129922-22-1	Polyester resin	N	NR	NR	NA	N	NR	N
169276-18-0*	Synthetic resin	N	NR	NR	NA	N	NR	N

Key:

EPCRA	Emergency Planning and Community Right-to-know Act (aka Title III, SARA)
302	Extremely hazardous substances
311/312 Categories	F = Fire Hazard R = Reactivity Hazard P = Pressure Related Hazard A = Acute Hazard C = Chronic Hazard
313 Information	Section 313 Supplier Notification - The chemicals listed above with a 'Y' in the 313 column are subject to reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know act of 1986 and of 40 CFR 372.
CERCLA	Comprehensive Emergency Response, Compensation and Liability Act of 1980.
HAP	Listed as a Clean Air Act Hazardous Air Pollutant.
TPQ	Threshold Planning Quantity.
RQ	Reportable Quantity
NA	not available
NR	not regulated

16. Other information

HMIS rating H: 2 F: 2 R: 0

Glossary of Terms:

ACGIH	American Conference of Governmental Industrial Hygienists.
IARC	International Agency for Research on Cancer.
NTP	National Toxicology Program.
OEL	Occupational Exposure Limit
OSHA	Occupational Safety and Health Administration.
STEL	Short term exposure limit.
TWA	Time-weighted average.
PNOR	Particles not otherwise regulated.
PNOC	Particles not otherwise classified.

NOTE: The list (above) of glossary terms may be modified.

Notice from Axalta Coating Systems
The document reflects information provided to Axalta Coating Systems by its suppliers. Information is accurate to the best of our knowledge and is subject to change as new data is received by Axalta Coating Systems. Persons receiving this information should make their own determination as to its suitability for their purposes prior to use. The information on this Material Safety Data Sheet relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process.
SDS prepared by:
Axalta Coating Systems Regulatory Affairs
Report version

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1. Identification of the substance/mixture and of the company/undertaking

Product name	Medium Temperature Activator	
Product code	15305S™	120524
Intended use	Hardener for professional use	
	Axalta Coating Systems, LLC Applied Corporate Center 50 Applied Card Way, Suite 300 US Glen Mills, PA 19342	
Telephone	Product information Medical emergency Transportation emergency	(855) 6-AXALTA (855) 274-5698 (800) 424-9300 (CHEMTREC)

2. Hazards identification

This preparation is hazardous per the following GHS criteria

GHS-Classification

Flammable liquids	Category 2
Serious eye damage/eye irritation	Category 2A
Respiratory sensitisation	Category 1
Skin sensitisation	Category 1
Target Organ Systemic Toxicant - Single exposure	Category 3

Endpoints which are ""not classified"", ""cannot classified"" and ""not applicable"" are not shown

GHS-Labelling

Hazard symbols

Signal word: Danger

Hazard statements:
Highly flammable liquid and vapour.
Causes serious eye irritation.
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
May cause an allergic skin reaction.
May cause respiratory irritation.

Precautionary statements:
Contaminated work clothing should not be allowed out of the workplace.
Ground/bond container and receiving equipment.
In case of inadequate ventilation wear respiratory protection.
Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
Take precautionary measures against static discharge.
Use explosion-proof electrical/ventilating/lighting equipment.
Use only non-sparking tools.
Use only outdoors or in a well-ventilated area.
Wear protective gloves/protective clothing/eye protection/face protection.
Avoid breathing dust/ vapours/ spray.
IF exposed or if you feel unwell: Call a POISON CENTER or doctor/ physician.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
If experiencing respiratory symptoms: Call a POISON CENTER or doctor/ physician.
If eye irritation persists: Get medical advice/ attention.

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IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.
IF ON SKIN: Wash with plenty of soap and water.
If skin irritation or rash occurs: Get medical advice/ attention.
Specific treatment (see supplemental first aid instructions on this label).
Wash contaminated clothing before reuse.
Store in a well-ventilated place. Keep container tightly closed.
Store locked up.
Dispose of contents/container to .?.

Other hazards which do not result in classification
Contains isocyanates. See information supplied by the manufacturer.

The following percentage of the mixture consists of ingredient(s) with unknown acute toxicity:
0 %

3. Composition/information on ingredients

Mixture of synthetic resins and solvents

Components

CAS-No.	Chemical Name	Concentration
28182-81-2	Aliphatic polyisocyanate resin	
79-20-9	Methyl acetate	
108-83-8	Diisobutyl ketone	
110-43-0	Methyl amyl ketone	

Non-regulated ingredients 1 - 5%
OSHA Hazardous: Yes

4. First aid measures

Eye contact
Remove contact lenses. Irrigate copiously with clean, fresh water for at least 15 minutes, holding the eyelids apart. Seek medical advice.

Skin contact
Do NOT use solvents or thinners. Take off all contaminated clothing immediately. Wash skin thoroughly with soap and water or use recognized skin cleanser. If skin irritation persists, call a physician.

Inhalation
Avoid inhalation of vapour or mist. Move to fresh air in case of accidental inhalation of vapours. If breathing is irregular or stopped, administer artificial respiration. If unconscious place in recovery position and seek medical advice. If symptoms persist, call a physician.

Ingestion
If swallowed, seek medical advice immediately and show this container or label. Do NOT induce vomiting. Keep at rest.

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Most important Symptoms/effects, acute and delayed

Inhalation
May cause nose and throat irritation. May cause nervous system depression characterized by the following progressive steps: headache, dizziness, nausea, staggering gait, confusion, unconsciousness. Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage. Exposure to isocyanates may cause respiratory sensitization. This effect may be permanent. Symptoms include an asthma-like reaction with shortness of breath, wheezing, cough or permanent lung sensitization. This effect may be delayed for several hours after exposure. Repeated overexposure to isocyanates may cause a decrease in lung function, which may be permanent. Individuals with lung or breathing problems or prior reactions to isocyanates must not be exposed to vapors or spray mist of this product.

Ingestion
May result in gastrointestinal distress.

Skin or eye contact
May cause irritation or burning of the eyes. Repeated or prolonged liquid contact may cause skin irritation with discomfort and dermatitis. Skin contact my cause skin sensitization.

Indication of immediate medical attention and special treatment needed if necessary
No data available on the product. See section 3 and 11 for hazardous ingredients found in the product.

5. Firefighting measures

Suitable extinguishing media
Universal aqueous film-forming foam, Carbon dioxide (CO2), Dry chemical

Extinguishing media which shall not be used for safety reasons
High volume water jet

Hazardous combustion products
CO, CO2, smoke, and oxides of any heavy metals that are reported in "Composition, Information on Ingredients" section.

Fire and Explosion Hazards
Flammable liquid. Vapor/air mixture will burn when an ignition source is present.

Special Protective Equipment and Fire Fighting Procedures
Full protective flameproof clothing should be worn as appropriate. Wear self contained breathing apparatus for fire fighting if necessary. In the event of fire, cool tanks with water spray. Do not allow run-off from fire fighting to enter public sewer systems or public waterways.

6. Accidental release measures

Procedures for cleaning up spills or leaks
Ventilate area. Remove sources of ignition. Do not breathe vapors. Do not get in eyes or on skin. Wear a positive-pressure, supplied-air respirator (NIOSH approved TC-19C), eye protection, gloves and protective clothing. Pour liquid decontamination solution over the spill and allow to sit at least 10 minutes. Typical decontamination solutions for isocyanate containing materials are: 20% Surfactant (Tergitol TM 10) and 80% Water OR 0-10% Ammonia, 2-5% Detergent and Water (balance) Confine and remove with inert absorbent. Pressure can be generated. Do not seal waste containers for 48 hours to allow C02 to vent. After 48 hours, material may be sealed and disposed of properly.

Environmental precautions
Do not let product enter drains. Notify the respective authorities in accordance with local law in the case of contamination of rivers, lakes or waste water systems.

7. Handling and storage

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Precautions for safe handling
Observe label precautions. Keep away from heat, sparks, flame, static discharge and other sources of ignition. VAPORS MAY CAUSE FLASH FIRE. Close container after each use. Ground containers when pouring. Do not transfer contents to bottles or unlabeled containers. Wash thoroughly after handling and before eating or smoking. Do not store above 120 deg F.
If material is a coating: do not sand, flame cut, braze or weld dry coating without a NIOSH approved air purifying respirator with particulate filters or appropriate ventilation, and gloves. Combustible dust clouds may be created where operations produce fine material (dust). Avoid formation of significant deposits of material as they may become airborne and form combustible dust clouds. Build up of fine material should be cleaned using gentle sweeping or vacuuming in accordance with best practices. Cleaning methods (e.g. compressed air) which can generate potentially combustible dust clouds should not be used.

Advice on protection against fire and explosion
Solvent vapours are heavier than air and may spread along floors. Vapors may form explosive mixtures with air and will burn when an ignition source is present. Always keep in containers of same material as the original one. Never use pressure to empty container: container is not a pressure vessel. The accumulation of contaminated rags may result in spontaneous combustion. Good housekeeping standards and regular safe removal of waste materials will minimize the risks of spontaneous combustion and other fire hazards.

Storage
Requirements for storage areas and containers
Observe label precautions. Store in a dry, well ventilated place away from sources of heat, ignition and direct sunlight. No smoking. Prevent unauthorized access. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Advice on common storage
Store separately from oxidizing agents, strongly alkaline and strongly acidic materials, amines, alcohols and water. Precautions should be taken to avoid exposure to atmospheric humidity or water. Evolution of CO2 in closed containers causes overpressure and produces a risk of bursting.

Additional information on storage conditions
Precautions should be taken to avoid exposure to atmospheric humidity or water. Humid air and/or water will produce carbon dioxide which will pressurize the container. Open drum carefully as content may be under pressure.

OSHA/NFPA Storage Classification: IB

8. Exposure controls/personal protection

Engineering controls and work practices
Provide adequate ventilation. Air-fed protective respiratory equipment must be worn by spray operator even when good ventilation is provided.

National occupational exposure limits

CAS-No.	Chemical Name	Source	Time	Type	Value	Note
28182-81-2	Aliphatic polyisocyanate resin	Supplier	8 hr	TWA	0.5 mg/m3	
79-20-9	Methyl acetate	ACGIH	15 min	STEL	250 ppm	
			8 hr	TWA	200 ppm	
		OSHA	8 hr	TWA	200 ppm	
108-83-8	Diisobutyl ketone	ACGIH	8 hr	TWA	25 ppm	
		OSHA	8 hr	TWA	50 ppm	
110-43-0	Methyl amyl ketone	ACGIH	8 hr	TWA	50 ppm	
		OSHA	8 hr	TWA	100 ppm	

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** TWA = Time-weighted average.
STEL = Short term exposure limit.

Protective equipment
Personal protective equipment should be worn to prevent contact with eyes, skin or clothing.

Respiratory protection
Do not breathe vapors or mists. Wear a positive-pressure, supplied air respirator (NIOSH approved TC-19C), while mixing activator with paint, during application and until all vapors and spray mists are exhausted. Follow respirator manufacturer s directions for respirator use. Do not permit anyone without protection in the painting area. Refer to the hardener/activator label instructions for further information. Individuals with history of lung or breathing problems or prior reaction to isocyanates should not use or be exposed to vapor or spray mist.

Eye protection
Desirable in all industrial situations. Goggles are preferred to prevent eye irritation. If safety glasses are substituted, include splash guard or side shields.

Skin and body protection
Neoprene gloves and coveralls are recommended.

Hygiene measures
Wash skin thoroughly with soap and water or use recognized skin cleanser. Do NOT use solvents or thinners.

Environmental exposure controls
Do not let product enter drains. For ecological information, refer to Ecological Information Section 12.

9. Physical and chemical properties

Appearance

Form: liquid Colour: clear

Flash point	25 °F	
Ignition temperature	345 °C	
Lower Explosive Limit	0.8 %	
Upper Explosive Limit	16 %	
Evapouration rate	Slower than Ether	
Vapor pressure of principal solvent	35.8 hPa	
Water solubility	appreciable	
Vapor density of principal solvent (Air = 1)	2.6	
Approx. Boiling Range	56 °C	
Approx. Freezing Range	Not applicable.	
Gallon Weight (lbs/gal)	8.72	
Specific Gravity	1.04	
Percent Volatile By Volume	41.06%	
Percent Volatile By Weight	34.00%	
Percent Solids By Volume	58.94%	
Percent Solids By Weight	66.00%	
pH (waterborne systems only)	No data available.	
Partition coefficient: n-octanol/water	no data available	
Ignition temperature	345 °C	DIN 51794
Decomposition temperature		
Viscosity (23 °C)	Not applicable.	ISO 2431-1993
VOC* less exempt (lbs/gal)	1.9	
VOC* as packaged (lbs/gal)	1.5	

* VOC less exempt (theoretical) and VOC as packaged (theoretical) are based upon the VOC of the packaged material at the point of manufacture.

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10. Stability and reactivity

Stability
Stable

Conditions to avoid
Stable under recommended storage conditions.

Materials to avoid
Keep away from oxidising agents and strongly acid or alkaline materials. Amines and alcohols cause exothermic reactions. Mixture reacts slowly with water resulting in evolution of CO2. Evolution of CO2 in closed containers causes overpressure and produces a risk of bursting.

Hazardous decomposition products
When exposed to high temperatures may produce hazardous decomposition products such as carbon monoxide and dioxide, smoke, oxides of nitrogen as well as hydrogen cyanide, amines, alcohols and water.

Hazardous Polymerization
Will not occur.

Sensitivity to Static Discharge
Solvent vapors in air may explode if static grounding and bonding is not used during transfer of this product.

Sensitivity to Mechanical Impact
None known.

11. Toxicological information

Information on likely routes of exposure

Inhalation
May cause nose and throat irritation. May cause nervous system depression characterized by the following progressive steps: headache, dizziness, nausea, staggering gait, confusion, unconsciousness. Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage. Exposure to isocyanates may cause respiratory sensitization. This effect may be permanent. Symptoms include an asthma-like reaction with shortness of breath, wheezing, cough or permanent lung sensitization. This effect may be delayed for several hours after exposure. Repeated overexposure to isocyanates may cause a decrease in lung function, which may be permanent. Individuals with lung or breathing problems or prior reactions to isocyanates must not be exposed to vapors or spray mist of this product.

Ingestion
May result in gastrointestinal distress.

Skin or eye contact
May cause irritation or burning of the eyes. Repeated or prolonged liquid contact may cause skin irritation with discomfort and dermatitis.

Delayed and immediate effects and also chronic effects from short and long term exposure:

Acute oral toxicity
not hazardous

Acute dermal toxicity
Not classified according to GHS criteria

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Acute inhalation toxicity
not hazardous

% of unknown composition 0 %

Skin corrosion/irritation
Not classified according to GHS criteria

Serious eye damage/eye irritation

methyl acetate	Category 1
2,6-dimethylheptan-4-one	Category 2A
heptan-2-one	Category 2B

Respiratory sensitisation

Hexamethylene diisocyanate, oligomers	Category 1

Skin sensitisation

Hexamethylene diisocyanate, oligomers	Category 1

Germ cell mutagenicity
Not classified according to GHS criteria

Carcinogenicity
Not classified according to GHS criteria

Toxicity for reproduction
Not classified according to GHS criteria

Target Organ Systemic Toxicant - Single exposure

- **Inhalation**

  airway sensitivity heptan-2-one

  Narcotic effects heptan-2-one

  Respiratory system 2,6-dimethylheptan-4-one, methyl acetate

- **Ingestion**

  Respiratory tract irritation heptan-2-one

  Narcotic effects heptan-2-one

Target Organ Systemic Toxicant - Repeated exposure
Not classified according to GHS criteria

Aspiration toxicity
Not classified according to GHS criteria

Numerical measures of toxicity (acute toxicity estimation (ATE),etc.)
No information available.

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Symptoms related to the physical, chemical and toxicological characteristics
Based on the properties of the isocyanate components and considering toxicological data on similar products, the following applies: This formulation may cause acute irritation and/or sensitization of the respiratory system leading to an asthmatic condition, wheeziness and a tightness of the chest. Sensitized persons may subsequently show asthmatic symptoms when exposed to atmospheric concentrations well below the OEL. Repeated exposure may lead to permanent respiratory disability. Exposure to component solvents vapours concentration in excess of the stated occupational exposure limit may result in adverse health effect such as mucous membrane and respiratory system irritation and adverse effect on kidney, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness. Through skin resorbtion, solvents can cause some of the effects described here. Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin resulting in non-allergic contact dermatitis and absorption through the skin. The liquid splashed in the eyes may cause irritation and reversible damage. Components of the product may be absorbed into the body through the skin.

Whether the hazardous chemical is listed by NTP, IARC or OSHA

12. Ecological information

There are no data available on the product itself. The product should not be allowed to enter drains or watercourses.

13. Disposal considerations

Waste Disposal Method
Do not allow material to contaminate ground water systems. Incinerate or otherwise dispose of waste material in accordance with Federal, State, Provincial, and local requirements. Do not incinerate in closed containers.

14. Transport information

International transport regulations

IMDG (Sea transport)	
UN number:	1263
Proper shipping name:	PAINT RELATED MATERIAL
Hazard Class:	3
Subsidiary Hazard Class:	Not applicable.
Packing group:	II
Marine Pollutant:	no
ICAO/IATA (Air transport)	
UN number:	1263
Proper shipping name:	PAINT RELATED MATERIAL
Hazard Class:	3
Subsidiary Hazard Class:	Not applicable.
Packing group:	II
DOT	
UN number:	1263
Proper shipping name:	PAINT RELATED MATERIAL
Hazard Class:	3
Subsidiary Hazard Class:	Not applicable.
Packing group:	II
Marine Pollutant:	no
EmS:	F-E,S-E

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Matters needing attention for transportation
Confirm that there is no breakage, corrosion, or leakage from the container before shipping. Be sure to prevent damage to cargo by loading so as to avoid falling, dropping, or collapse. Ship in appropriate containers with denotation of the content in accordance with the relevant statutes and rules.

15. Regulatory information

TSCA Status
In compliance with TSCA Inventory requirements for commercial purposes.

DSL Status
All components of the mixture are listed on the DSL.

Photochemical Reactivity
Photochemically reactive

Regulatory information

		EPCRA					CERCLA	CAA
CAS #	Ingredient	302	TPQ	RQ	311 - 312	313	RQ(lbs)	HAP
28182-81-2	Aliphatic polyisocyanate resin	N	NR	NR	A,C,R	N	NR	N
79-20-9	Methyl acetate	N	NR	NR	A,C	N	100	N
108-83-8	Diisobutyl ketone	N	NR	NR	C,F	N	NR	N
110-43-0	Methyl amyl ketone	N	NR	NR	A,C,F	N	NR	N

Key:

EPCRA	Emergency Planning and Community Right-to-know Act (aka Title III, SARA)
302	Extremely hazardous substances
311/312 Categories	F = Fire Hazard R = Reactivity Hazard P = Pressure Related Hazard A = Acute Hazard C = Chronic Hazard
313 Information	Section 313 Supplier Notification - The chemicals listed above with a 'Y' in the 313 column are subject to reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know act of 1986 and of 40 CFR 372.
CERCLA	Comprehensive Emergency Response, Compensation and Liability Act of 1980.
HAP	Listed as a Clean Air Act Hazardous Air Pollutant.
TPQ	Threshold Planning Quantity.
RQ	Reportable Quantity
NA	not available
NR	not regulated

16. Other information

HMIS rating H: 3 F: 3 R: 1

Glossary of Terms:

ACGIH	American Conference of Governmental Industrial Hygienists.
IARC	International Agency for Research on Cancer.
NTP	National Toxicology Program.
OEL	Occupational Exposure Limit
OSHA	Occupational Safety and Health Administration.

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STEL	Short term exposure limit.
TWA	Time-weighted average.
PNOR	Particles not otherwise regulated.
PNOC	Particles not otherwise classified.

NOTE: The list (above) of glossary terms may be modified.

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The document reflects information provided to Axalta Coating Systems by its suppliers. Information is accurate to the best of our knowledge and is subject to change as new data is received by Axalta Coating Systems. Persons receiving this information should make their own determination as to its suitability for their purposes prior to use. The information on this Material Safety Data Sheet relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process.
SDS prepared by:
Axalta Coating Systems Regulatory Affairs
Report version

Version	Changes
5.1	16

Revision Date: 2014-10-06

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1. Identification of the substance/mixture and of the company/undertaking

Product name	Accelerator	
Product code	389S™	131231
Intended use	Intermediate	
	Axalta Coating Systems, LLC Applied Corporate Center 50 Applied Card Way, Suite 300 US Glen Mills, PA 19342	
Telephone	Product information Medical emergency Transportation emergency	(855) 6-AXALTA (855) 274-5698 (800) 424-9300 (CHEMTREC)

2. Hazards identification

This preparation is hazardous per the following GHS criteria

GHS-Classification

Flammable liquids	Category 3
Acute oral toxicity	Category 4
Acute dermal toxicity	Category 3
Acute inhalation toxicity	Category 3
Germ cell mutagenicity	Category 2
Toxicity for reproduction	Category 1B
Target Organ Systemic Toxicant - Repeated exposure	Category 1

Endpoints which are ""not classified"", ""cannot classified"" and ""not applicable"" are not shown

GHS-Labelling

Hazard symbols

Signal word: Danger

Hazard statements:
Flammable liquid and vapour.
Harmful if swallowed.
Toxic in contact with skin.
Toxic if inhaled.
Suspected of causing genetic defects.
May damage fertility or the unborn child.
Causes damage to organs through prolonged or repeated exposure.

Precautionary statements:
Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
Do not eat, drink or smoke when using this product.
Ground/bond container and receiving equipment.
Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
Obtain special instructions before use.
Take precautionary measures against static discharge.
Use explosion-proof electrical/ventilating/lighting equipment.
Use only non-sparking tools.
Use only outdoors or in a well-ventilated area.
Wear protective gloves/ eye protection/ face protection.

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Wear protective gloves/ protective clothing.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
IF exposed or concerned: Get medical advice/ attention.
IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.
IF ON SKIN: Wash with plenty of soap and water.
IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician.
Remove/Take off immediately all contaminated clothing.
Specific measures (see supplemental first aid instructions on this label).
Store in a well-ventilated place. Keep container tightly closed.
Store locked up.
Dispose of contents/container to .?.

Other hazards which do not result in classification
None known.

The following percentage of the mixture consists of ingredient(s) with unknown acute toxicity:
0 %

3. Composition/information on ingredients

Mixture of synthetic resins and solvents

Components

CAS-No.	Chemical Name	Concentration
123-54-6	2,4-pentanedione	
77-58-7	Dibutyl tin dilaurate	

Non-regulated ingredients 0.0 - 0.1%
OSHA Hazardous: Yes

4. First aid measures

Eye contact
Remove contact lenses. Irrigate copiously with clean, fresh water for at least 15 minutes, holding the eyelids apart. Seek medical advice.

Skin contact
Do NOT use solvents or thinners. Take off all contaminated clothing immediately. Wash skin thoroughly with soap and water or use recognized skin cleanser. If skin irritation persists, call a physician.

Inhalation
Avoid inhalation of vapour or mist. Move to fresh air in case of accidental inhalation of vapours. If breathing is irregular or stopped, administer artificial respiration. If unconscious place in recovery position and seek medical advice. If symptoms persist, call a physician.

Ingestion
If swallowed, seek medical advice immediately and show this container or label. Do NOT induce vomiting. Keep at rest.

Most Important Symptoms/effects, acute and delayed

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Inhalation
May cause nose and throat irritation. May cause nervous system depression characterized by the following progressive steps: headache, dizziness, nausea, staggering gait, confusion, unconsciousness. Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage.

Ingestion
May result in gastrointestinal distress.

Skin or eye contact
May cause irritation or burning of the eyes. Repeated or prolonged liquid contact may cause skin irritation with discomfort and dermatitis.

Indication of immediate medical attention and special treatment needed if necessary
No data available on the product. See section 3 and 11 for hazardous ingredients found in the product.

5. Firefighting measures

Suitable extinguishing media
Universal aqueous film-forming foam, Carbon dioxide (CO2), Dry chemical

Extinguishing media which shall not be used for safety reasons
High volume water jet

Hazardous combustion products
CO, CO2, smoke, and oxides of any heavy metals that are reported in "Composition, Information on Ingredients" section.

Fire and Explosion Hazards
Flammable liquid. Vapor/air mixture will burn when an ignition source is present.

Special Protective Equipment and Fire Fighting Procedures
Full protective flameproof clothing should be worn as appropriate. Wear self contained breathing apparatus for fire fighting if necessary. In the event of fire, cool tanks with water spray. Do not allow run-off from fire fighting to enter public sewer systems or public waterways.

6. Accidental release measures

Procedures for cleaning up spills or leaks
Ventilate area. Remove sources of ignition. Prevent skin and eye contact and breathing of vapor. Wear a properly fitted air-purifying respirator with organic vapor cartridges (NIOSH approved TC-23C), eye protection, gloves and protective clothing. Confine, remove with inert absorbent, and dispose of properly.

Environmental precautions
Do not let product enter drains. Notify the respective authorities in accordance with local law in the case of contamination of rivers, lakes or waste water systems.

7. Handling and storage

Precautions for safe handling
Observe label precautions. Keep away from heat, sparks, flame, static discharge and other sources of ignition. VAPORS MAY CAUSE FLASH FIRE. Close container after each use. Ground containers when pouring. Do not transfer contents to bottles or unlabeled containers. Wash thoroughly after handling and before eating or smoking. Do not store above 120 deg F.
If material is a coating: do not sand, flame cut, braze or weld dry coating without a NIOSH approved air purifying respirator with particulate filters or appropriate ventilation, and gloves. Combustible dust clouds may be created where operations produce fine material (dust). Avoid formation of significant deposits of material as they may become airborne and form combustible dust clouds. Build up of fine material should be cleaned using gentle sweeping or vacuuming in accordance with best practices. Cleaning methods (e.g. compressed air) which can generate potentially combustible dust clouds should not be used.

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Advice on protection against fire and explosion
Solvent vapours are heavier than air and may spread along floors. Vapors may form explosive mixtures with air and will burn when an ignition source is present. Always keep in containers of same material as the original one. Never use pressure to empty container: container is not a pressure vessel. The accumulation of contaminated rags may result in spontaneous combustion. Good housekeeping standards and regular safe removal of waste materials will minimize the risks of spontaneous combustion and other fire hazards.

Storage
Requirements for storage areas and containers
Observe label precautions. Store in a dry, well ventilated place away from sources of heat, ignition and direct sunlight. No smoking. Prevent unauthorized access. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Advice on common storage
Store separately from oxidizing agents and strongly alkaline and strongly acidic materials.

OSHA/NFPA Storage Classification: IC

8. Exposure controls/personal protection

Engineering controls and work practices
Provide adequate ventilation. This should be achieved by a good general extraction and -if practically feasible- by the use of a local exhaust ventilation. If these are not sufficient to maintain concentrations of particulates and solvent vapour below the OEL, suitable respiratory protection must be worn.

National occupational exposure limits

CAS-No.	Chemical Name	Source	Time	Type	Value	Note
123-54-6	2,4-pentanedione	ACGIH	8 hr	TWA	25 ppm	Skin
		Dupont	8 & 12 hour	TWA	5 ppm	
77-58-7	Dibutyl tin dilaurate	ACGIH	15 min	STEL	0.2 mg/m3	Sn
			8 hr	TWA	0.1 mg/m3	Sn
		OSHA	8 hr	TWA	0.1 mg/m3	Sn

** TWA = Time-weighted average.
STEL = Short term exposure limit.

Protective equipment
Personal protective equipment should be worn to prevent contact with eyes, skin or clothing.

Respiratory protection
Do not breathe vapors or mists. Wear a properly fitted air-purifying respirator with organic vapor cartridges (NIOSH approved TC-23C) and particulate filter (NIOSH TC-84A) during application and until all vapors and spray mists are exhausted. In confined spaces, or in situations where continuous spray operations are typical, or if proper air-purifying respirator fit is not possible, wear a positive pressure, supplied-air respirator (NIOSH TC-19C). In all cases, follow respirator manufacturer's directions for respirator use. Do not permit anyone without protection in the painting area.

Eye protection
Desirable in all industrial situations. Goggles are preferred to prevent eye irritation. If safety glasses are substituted, include splash guard or side shields.

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Skin and body protection
Neoprene gloves and coveralls are recommended.

Hygiene measures
Wash skin thoroughly with soap and water or use recognized skin cleanser. Do NOT use solvents or thinners.

Environmental exposure controls
Do not let product enter drains. For ecological information, refer to Ecological Information Section 12.

9. Physical and chemical properties

Appearance

Form: liquid Colour: clear Odour: Characteristic Paint Odor

Flash point	75 °F	
Ignition temperature	350 °C	
Lower Explosive Limit	1.7 %	
Upper Explosive Limit	11.6 %	
Evapouration rate	Slower than Ether	
Vapor pressure of principal solvent	8.9 hPa	
Water solubility	appreciable	
Vapor density of principal solvent (Air = 1)	3.5	
Approx. Boiling Range	135 °C	
Approx. Freezing Range	Not applicable.	
Gallon Weight (lbs/gal)	8.15	
Specific Gravity	0.98	
Percent Volatile By Volume	99.07%	
Percent Volatile By Weight	99.00%	
Percent Solids By Volume	0.93%	
Percent Solids By Weight	1.00%	
pH (waterborne systems only)	No data available.	
Partition coefficient: n-octanol/water	no data available	
Ignition temperature	350 °C	DIN 51794
Decomposition temperature		
Viscosity (23 °C)	Not applicable.	ISO 2431-1993
VOC* less exempt (lbs/gal)	8.1	
VOC* as packaged (lbs/gal)	8.1	

* VOC less exempt (theoretical) and VOC as packaged (theoretical) are based upon the VOC of the packaged material at the point of manufacture.

10. Stability and reactivity

Stability
Stable

Conditions to avoid
Stable under recommended storage conditions.

Materials to avoid
None reasonably foreseeable.

Hazardous decomposition products
When exposed to high temperatures may produce hazardous decomposition products such as carbon monoxide and dioxide, smoke, oxides of nitrogen.

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Hazardous Polymerization
Will not occur.

Sensitivity to Static Discharge
Solvent vapors in air may explode if static grounding and bonding is not used during transfer of this product.

Sensitivity to Mechanical Impact
None known.

11. Toxicological information

Information on likely routes of exposure

Inhalation
May cause nose and throat irritation. May cause nervous system depression characterized by the following progressive steps: headache, dizziness, nausea, staggering gait, confusion, unconsciousness. Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage.

Ingestion
May result in gastrointestinal distress.

Skin or eye contact
May cause irritation or burning of the eyes. Repeated or prolonged liquid contact may cause skin irritation with discomfort and dermatitis.

Delayed and immediate effects and also chronic effects from short and long term exposure:

Acute oral toxicity

pentane-2,4-dione	Category 4
dibutylbis((1-oxododecyl)oxy)stannane	Category 2

Acute dermal toxicity

pentane-2,4-dione	Category 3
dibutylbis((1-oxododecyl)oxy)stannane	Category 3

Acute inhalation toxicity

pentane-2,4-dione	Category 3
dibutylbis((1-oxododecyl)oxy)stannane	Category 2

% of unknown composition 0 %

Skin corrosion/irritation
Not classified according to GHS criteria

Serious eye damage/eye irritation
Not classified according to GHS criteria

Respiratory sensitisation
Not classified according to GHS criteria

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Skin sensitisation
not hazardous

Germ cell mutagenicity

pentane-2,4-dione	Category 2
dibutylbis((1-oxododecyl)oxy)stannane	Category 2

Carcinogenicity
Not classified according to GHS criteria

Toxicity for reproduction

dibutylbis((1-oxododecyl)oxy)stannane	Category 1A

Target Organ Systemic Toxicant - Single exposure
not hazardous

Target Organ Systemic Toxicant - Repeated exposure

- **Skin Absorption**

  Central nervous system pentane-2,4-dione

Aspiration toxicity
Not classified according to GHS criteria

Numerical measures of toxicity (acute toxicity estimation (ATE),etc.)
No information available.

Symptoms related to the physical, chemical and toxicological characteristics
Exposure to component solvents vapours concentration in excess of the stated occupational exposure limit may result in adverse health effect such as mucous membrane and respiratory system irritation and adverse effect on kidney, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness. Through skin resorbtion, solvents can cause some of the effects described here. Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin resulting in non-allergic contact dermatitis and absorption through the skin. The liquid splashed in the eyes may cause irritation and reversible damage.

Whether the hazardous chemical is listed by NTP, IARC or OSHA

12. Ecological information

There are no data available on the product itself. The product should not be allowed to enter drains or watercourses.

13. Disposal considerations

Waste Disposal Method
Do not allow material to contaminate ground water systems. Incinerate or otherwise dispose of waste material in accordance with Federal, State, Provincial, and local requirements. Do not incinerate in closed containers.

14. Transport information

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International transport regulations

IMDG (Sea transport)

UN number:	1263
Proper shipping name:	PAINT RELATED MATERIAL
Hazard Class:	3
Subsidiary Hazard Class:	Not applicable.
Packing group:	III
Marine Pollutant:	no

ICAO/IATA (Air transport)

UN number:	1263
Proper shipping name:	PAINT RELATED MATERIAL
Hazard Class:	3
Subsidiary Hazard Class:	Not applicable.
Packing group:	III

DOT

UN number:	1263
Proper shipping name:	PAINT RELATED MATERIAL
Hazard Class:	3
Subsidiary Hazard Class:	Not applicable.
Packing group:	III
Marine Pollutant:	no
EmS:	F-E,S-E

Matters needing attention for transportation
Confirm that there is no breakage, corrosion, or leakage from the container before shipping. Be sure to prevent damage to cargo by loading so as to avoid falling, dropping, or collapse. Ship in appropriate containers with denotation of the content in accordance with the relevant statutes and rules.

15. Regulatory information

TSCA Status
In compliance with TSCA Inventory requirements for commercial purposes.

DSL Status
All components of the mixture are listed on the DSL.

Photochemical Reactivity
Non-photochemically reactive

Regulatory information

		EPCRA					CERCLA	CAA
CAS #	Ingredient	302	TPQ	RQ	311 - 312	313	RQ(lbs)	HAP
123-54-6	2,4-pentanedione	N	NR	NR	A,C,F	N	NR	N
77-58-7	Dibutyl tin dilaurate	N	NR	NR	NA	N	NR	N

Key:

EPCRA	Emergency Planning and Community Right-to-know Act (aka Title III, SARA)	
302	Extremely hazardous substances	
311/312 Categories	F = Fire Hazard	A = Acute Hazard

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	R = Reactivity Hazard C = Chronic Hazard P = Pressure Related Hazard
313 Information	Section 313 Supplier Notification - The chemicals listed above with a 'Y' in the 313 column are subject to reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know act of 1986 and of 40 CFR 372.
CERCLA	Comprehensive Emergency Response, Compensation and Liability Act of 1980.
HAP	Listed as a Clean Air Act Hazardous Air Pollutant.
TPQ	Threshold Planning Quantity.
RQ	Reportable Quantity
NA	not available
NR	not regulated

16. Other information

HMIS rating H: 2 F: 3 R: 0

Glossary of Terms:

ACGIH	American Conference of Governmental Industrial Hygienists.
IARC	International Agency for Research on Cancer.
NTP	National Toxicology Program.
OEL	Occupational Exposure Limit
OSHA	Occupational Safety and Health Administration.
STEL	Short term exposure limit.
TWA	Time-weighted average.
PNOR	Particles not otherwise regulated.
PNOC	Particles not otherwise classified.

NOTE: The list (above) of glossary terms may be modified.

Notice from Axalta Coating Systems
The document reflects information provided to Axalta Coating Systems by its suppliers. Information is accurate to the best of our knowledge and is subject to change as new data is received by Axalta Coating Systems. Persons receiving this information should make their own determination as to its suitability for their purposes prior to use. The information on this Material Safety Data Sheet relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process.
SDS prepared by:
Axalta Coating Systems Regulatory Affairs
Report version

Version	Changes
2.3	16

Revision Date: 2014-11-18

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1. Identification of the substance/mixture and of the company/undertaking

Product name	GRAY HYBRID EPOXY PRIMER	
Product code	825P32760	150220
Intended use	Coating for professional use	
	Axalta Coating Systems, LLC Applied Corporate Center 50 Applied Card Way, Suite 300 US Glen Mills, PA 19342	
Telephone	Product information Medical emergency Transportation emergency	(855) 6-AXALTA (855) 274-5698 (800) 424-9300 (CHEMTREC)

2. Hazards identification

This preparation is hazardous per the following GHS criteria

GHS-Classification

Flammable liquids	Category 2
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2A
Skin sensitisation	Category 1
Carcinogenicity	Category 2

Endpoints which are ""not classified"", ""cannot classified"" and ""not applicable"" are not shown

GHS-Labelling

Hazard symbols	
Signal word	Danger
Hazard statements	Highly flammable liquid and vapour. Causes skin irritation. Causes serious eye irritation. May cause an allergic skin reaction. Suspected of causing cancer.
Precautionary statements	Contaminated work clothing should not be allowed out of the workplace. Ground/bond container and receiving equipment. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Keep container tightly closed. Obtain special instructions before use. Take precautionary measures against static discharge. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Wear protective gloves/protective clothing/eye protection/face protection. Avoid breathing dust/ vapours/ spray. IF exposed or concerned: Get medical advice/ attention. If eye irritation persists: Get medical advice/ attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

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IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.
IF ON SKIN: Wash with plenty of soap and water.
If skin irritation or rash occurs: Get medical advice/ attention.
Specific treatment (see supplemental first aid instructions on this label).
Take off contaminated clothing and wash before reuse.
Store in a well-ventilated place. Keep cool.
Store locked up.
Dispose of contents/container in accordance with local regulations.

Other hazards which do not result in classification
Contains epoxy constituents. See information supplied by the manufacturer.

The following percentage of the mixture consists of ingredient(s) with unknown acute toxicity:
0 %

3. Composition/information on ingredients

Mixture of synthetic resins, pigments, and solvents

Components

CAS-No.	Chemical Name	Concentration	GHS Hazardous
7727-43-7	Barium sulfate	10 - 20%	
7779-90-0	Zinc phosphate	8%	√
13463-67-7	Titanium dioxide	6.9%	
14807-96-6	Hydrous magnesium silicate	5 - 10%	
1332-58-7	Kaolin	5 - 10%	
25068-38-6	Bisphenol-epichlorohydrin type polymer	4 - 15%	√
25068-38-6	Epoxy resin	4 - 15%	√
110-12-3	Methyl isoamyl ketone	4 - 15%	√
540-88-5	T-butyl acetate	4 - 15%	√
71-36-3	N-butyl alcohol	2%	√
1330-20-7	Xylene	2%	√
67-64-1	Acetone	1 - 4%	√
No information available.	Acrylic polymer	1 - 5%	
64742-94-5	Aromatic hydrocarbon	1 - 4%	√
1317-65-3	Limestone (calcium carbonate)	1 - 5%	
100-41-4	Ethylbenzene	0.4%	√
91-20-3	Naphthalene	0.3%	√

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OSHA Hazardous: Yes
* Assigned CAS No. - An official CAS No. does not exist. The CAS No. shown is for a similar chemical.

4. First aid measures

Eye contact
Remove contact lenses. Irrigate copiously with clean, fresh water for at least 15 minutes, holding the eyelids apart. Seek medical advice.

Skin contact
Do NOT use solvents or thinners. Take off all contaminated clothing immediately. Wash skin thoroughly with soap and water or use recognized skin cleanser. If skin irritation persists, call a physician.

Inhalation
Avoid inhalation of vapour or mist. Move to fresh air in case of accidental inhalation of vapours. If breathing is irregular or stopped, administer artificial respiration. If unconscious place in recovery position and seek medical advice. If symptoms persist, call a physician.

Ingestion
If swallowed, seek medical advice immediately and show this container or label. Do NOT induce vomiting. Keep at rest.

Most Important Symptoms/effects, acute and delayed

Inhalation
May cause nose and throat irritation. May cause nervous system depression characterized by the following progressive steps: headache, dizziness, nausea, staggering gait, confusion, unconsciousness. Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage.

Ingestion
May result in gastrointestinal distress.

Skin or eye contact
May cause irritation or burning of the eyes. Repeated or prolonged liquid contact may cause skin irritation with discomfort and dermatitis.

Indication of immediate medical attention and special treatment needed if necessary
No data available on the product. See section 3 and 11 for hazardous ingredients found in the product.

5. Firefighting measures

Suitable extinguishing media
Universal aqueous film-forming foam, Carbon dioxide (CO2), Dry chemical

Extinguishing media which shall not be used for safety reasons
High volume water jet

Hazardous combustion products
CO, CO2, smoke, and oxides of any heavy metals that are reported in "Composition, Information on Ingredients" section.

Fire and Explosion Hazards
Flammable liquid. Vapor/air mixture will burn when an ignition source is present.

Special Protective Equipment and Fire Fighting Procedures
Full protective flameproof clothing should be worn as appropriate. Wear self contained breathing apparatus for fire fighting if necessary. In the event of fire, cool tanks with water spray. Do not allow run-off from fire fighting to enter public sewer systems or public waterways.

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6. Accidental release measures

Procedures for cleaning up spills or leaks
Ventilate area. Remove sources of ignition. Prevent skin and eye contact and breathing of vapor. Wear a properly fitted air-purifying respirator with organic vapor cartridges (NIOSH approved TC-23C), eye protection, gloves and protective clothing. Confine, remove with inert absorbent, and dispose of properly.

Environmental precautions
Do not let product enter drains. Notify the respective authorities in accordance with local law in the case of contamination of rivers, lakes or waste water systems.

7. Handling and storage

Precautions for safe handling
Observe label precautions. Keep away from heat, sparks, flame, static discharge and other sources of ignition. VAPORS MAY CAUSE FLASH FIRE. Close container after each use. Ground containers when pouring. Do not transfer contents to bottles or unlabeled containers. Wash thoroughly after handling and before eating or smoking. Do not store above 120 deg F.
If material is a coating: do not sand, flame cut, braze or weld dry coating without a NIOSH approved air purifying respirator with particulate filters or appropriate ventilation, and gloves. Combustible dust clouds may be created where operations produce fine material (dust). Avoid formation of significant deposits of material as they may become airborne and form combustible dust clouds. Build up of fine material should be cleaned using gentle sweeping or vacuuming in accordance with best practices. Cleaning methods (e.g. compressed air) which can generate potentially combustible dust clouds should not be used.

Advice on protection against fire and explosion
Solvent vapours are heavier than air and may spread along floors. Vapors may form explosive mixtures with air and will burn when an ignition source is present. Always keep in containers of same material as the original one. Never use pressure to empty container: container is not a pressure vessel. The accumulation of contaminated rags may result in spontaneous combustion. Good housekeeping standards and regular safe removal of waste materials will minimize the risks of spontaneous combustion and other fire hazards.

Storage
Requirements for storage areas and containers
Observe label precautions. Store in a dry, well ventilated place away from sources of heat, ignition and direct sunlight. No smoking. Prevent unauthorized access. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Advice on common storage
Store separately from oxidizing agents and strongly alkaline and strongly acidic materials.

OSHA/NFPA Storage Classification: IB

8. Exposure controls/personal protection

Engineering controls and work practices
Provide adequate ventilation. This should be achieved by a good general extraction and -if practically feasible- by the use of a local exhaust ventilation. If these are not sufficient to maintain concentrations of particulates and solvent vapour below the OEL, suitable respiratory protection must be worn.

National occupational exposure limits

CAS-No.	Chemical Name	Source	Time	Type	Value	Note
7727-43-7	Barium sulfate	OSHA	8 hr	TWA	15 mg/m3	Total Dust
			8 hr	TWA	5 mg/m3	Respirable Dust
		Dupont	8 & 12 hour	TWA	10 mg/m3	Total Dust

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CAS-No.	Chemical Name	Source	Time	Type	Value	Note
			8 & 12 hour	TWA	5 mg/m3	Respirable Dust
7779-90-0	Zinc phosphate	OSHA	8 hr	TWA	5 mg/m3	Respirable Dust
13463-67-7	Titanium dioxide	OSHA	8 hr	TWA	15 mg/m3	Total Dust
		Dupont	8 & 12 hour	TWA	10 mg/m3	Total Dust
			8 & 12 hour	TWA	5 mg/m3	Respirable Dust
14807-96-6	Hydrous magnesium silicate	ACGIH	8 hr	TWA	2 mg/m3	Respirable Dust
		Dupont	8 & 12 hour	TWA	0.5 mg/m3	Respirable Dust
1332-58-7	Kaolin	ACGIH	8 hr	TWA	2 mg/m3	Respirable Dust
		OSHA		TWA	15 mg/m3	Total Dust
				TWA	5 mg/m3	Respirable Dust
110-12-3	Methyl isoamyl ketone	ACGIH	8 hr	TWA	20 ppm	
540-88-5	T-butyl acetate	ACGIH	8 hr	TWA	200 ppm	
		OSHA	8 hr	TWA	200 ppm	
71-36-3	N-butyl alcohol	ACGIH	8 hr	TWA	20 ppm	
		OSHA	8 hr	TWA	100 ppm	
		Dupont	15 min	TWA	50 ppm	
			8 & 12 hour	TWA	25 ppm	
1330-20-7	Xylene	ACGIH	15 min	STEL	150 ppm	
			8 hr	TWA	100 ppm	
		OSHA	8 hr	TWA	100 ppm	
		Dupont	8 & 12 hour	TWA	100 ppm	
67-64-1	Acetone	ACGIH	15 min	STEL	750 ppm	
			8 hr	TWA	500 ppm	
		OSHA	8 hr	TWA	1,000 ppm	
		Dupont	8 & 12 hour	TWA	500 ppm	

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CAS-No.	Chemical Name	Source	Time	Type	Value	Note
64742-94-5	Aromatic hydrocarbon	Dupont	8 & 12 hour	TWA	100 ppm	
1317-65-3	Limestone (calcium carbonate)	ACGIH	8 hr	TWA	10 mg/m3	
		OSHA	8 hr	TWA	15 mg/m3	Total Dust
			8 hr	TWA	5 mg/m3	Respirable Dust
100-41-4	Ethylbenzene	ACGIH	8 hr	TWA	20 ppm	
		OSHA	8 hr	TWA	100 ppm	
		Dupont	8 & 12 hour	TWA	25 ppm	
91-20-3	Naphthalene	ACGIH		CEIL	15 ppm	Skin
			8 hr	TWA	10 ppm	Skin
		OSHA	8 hr	TWA	10 ppm	
		Dupont	8 & 12 hour	TWA	0.1 ppm	

** TWA = Time-weighted average.
STEL = Short term exposure limit.
CEIL = Ceiling.

Protective equipment
Personal protective equipment should be worn to prevent contact with eyes, skin or clothing.

Respiratory protection
Do not breathe vapors or mists. Wear an appropriate, properly fitted NIOSH approved respirator during application and until all vapors and spray mists are exhausted unless air monitoring demonstrates vapor/mist levels are below applicable limits. If respirators are required, use a properly fitted air-purifying respirator with organic vapor cartridges (NIOSH approved TC-23C) and particulate filter (NIOSH TC-84A). In confined spaces, or in situations where continuous spray operations are typical, or if proper air-purifying respirator fit is not possible, wear a positive pressure, supplied-air respirator (NIOSH TC-19C). In all cases, follow respirator manufacturer's directions for respirator use.'

Eye protection
Desirable in all industrial situations. Goggles are preferred to prevent eye irritation. If safety glasses are substituted, include splash guard or side shields.

Skin and body protection
Neoprene gloves and coveralls are recommended.

Hygiene measures
Wash skin thoroughly with soap and water or use recognized skin cleanser. Do NOT use solvents or thinners.

Environmental exposure controls
Do not let product enter drains. For ecological information, refer to Ecological Information Section 12.

9. Physical and chemical properties

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Appearance

Form: liquid Colour: grey

Flash point	59 °F	
Ignition temperature	301 °C	
Lower Explosive Limit	1 %	
Upper Explosive Limit	8.2 %	
Evapouration rate	Slower than Ether	
Vapor pressure of principal solvent	11.3 hPa	
Water solubility	moderate	
Vapor density of principal solvent (Air = 1)	3.9	
Approx. Boiling Range	56 °C	
Approx. Freezing Range	Not applicable.	
Gallon Weight (lbs/gal)	12.28	
Specific Gravity	1.47	
Percent Volatile By Volume	49.70%	
Percent Volatile By Weight	28.30%	
Percent Solids By Volume	50.30%	
Percent Solids By Weight	71.70%	
pH (waterborne systems only)	not applicable	
Partition coefficient: n-octanol/water	no data available	
Ignition temperature	301 °C	DIN 51794
Decomposition temperature		
Viscosity (23 °C)	Not applicable.	ISO 2431-1993
VOC* less exempt (lbs/gal)	3.3	
VOC* as packaged (lbs/gal)	3.1	
VOC LE (TBAC)	2.7	
VOC AP (TBAC)	2.2	

* VOC less exempt (theoretical) and VOC as packaged (theoretical) are based upon the VOC of the packaged material at the point of manufacture.
TBAC is not universally recognized as an exempt solvent.
Users should consult the applicable regulations for their region.

10. Stability and reactivity

Stability
Stable

Conditions to avoid
Stable under recommended storage conditions.

Materials to avoid
None reasonably foreseeable.

Hazardous decomposition products
When exposed to high temperatures may produce hazardous decomposition products such as carbon monoxide and dioxide, smoke, oxides of nitrogen.

Hazardous Polymerization
Will not occur.

Sensitivity to Static Discharge
Solvent vapors in air may explode if static grounding and bonding is not used during transfer of this product.

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Sensitivity to Mechanical impact
None known.

11. Toxicological information

Information on likely routes of exposure

Inhalation
May cause nose and throat irritation. May cause nervous system depression characterized by the following progressive steps: headache, dizziness, nausea, staggering gait, confusion, unconsciousness. Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage.

Ingestion
May result in gastrointestinal distress.

Skin or eye contact
May cause irritation or burning of the eyes. Repeated or prolonged liquid contact may cause skin irritation with discomfort and dermatitis.

Delayed and immediate effects and also chronic effects from short and long term exposure:

Acute oral toxicity
not hazardous

Acute dermal toxicity
not hazardous

Acute inhalation toxicity
not hazardous

% of unknown composition 0 %

Skin corrosion/irritation

epoxy resin (number average molecular weight <= 700)	Category 2
epoxy resin (number average molecular weight 700 <= 1200)	Category 2
5-methylhexan-2-one	Category 3
tert-butyl acetate	Category 3
n-butanol	Category 2
xylene	Category 2
acetone	Category 3
Solvent naphtha (petroleum), heavy arom.	Category 2
ethylbenzene	Category 3

Serious eye damage/eye irritation

epoxy resin (number average molecular weight <= 700)	Category 2A
epoxy resin (number average molecular weight 700 <= 1200)	Category 2A
5-methylhexan-2-one	Category 2A
tert-butyl acetate	Category 2A
n-butanol	Category 1
xylene	Category 2A
acetone	Category 2A
ethylbenzene	Category 2B

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Respiratory sensitisation
Not classified according to GHS criteria

Skin sensitisation

epoxy resin (number average molecular weight <= 700)	Category 1
epoxy resin (number average molecular weight 700 <= 1200)	Category 1

Germ cell mutagenicity
Not classified according to GHS criteria

Carcinogenicity

Naphthalene	Category 2

Toxicity for reproduction
Not classified according to GHS criteria

Target Organ Systemic Toxicant - Single exposure
Not classified according to GHS criteria

Target Organ Systemic Toxicant - Repeated exposure
Not classified according to GHS criteria

Aspiration toxicity
Not classified according to GHS criteria

Numerical measures of toxicity (acute toxicity estimation (ATE),etc.)
No information available.

Symptoms related to the physical, chemical and toxicological characteristics
Exposure to component solvents vapours concentration in excess of the stated occupational exposure limit may result in adverse health effect such as mucous membrane and respiratory system irritation and adverse effect on kidney, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness. Through skin resorbtion, solvents can cause some of the effects described here. Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin resulting in non-allergic contact dermatitis and absorption through the skin. The liquid splashed in the eyes may cause irritation and reversible damage. Based on the properties of the epoxy constituent(s) and considering toxicological data on similar preparations, this preparation may be a skin sensitiser and an irritant. Low molecular epoxy constituents are irritating to eyes, mucous membranes and skin. Repeated skin contact may lead to irritation and to sensitization, possibly with cross-sensitization to other epoxies. Avoid skin and eye contact. Avoid inhalation of vapour or mist.

Whether the hazardous chemical is listed by NTP, IARC or OSHA

Titanium dioxide	IARC 2B
ethylbenzene	IARC 2B
Naphthalene	IARC 2B
Naphthalene	NTP Anticipated
Titanium dioxide	IARC 2B

12. Ecological information

There are no data available on the product itself. The product should not be allowed to enter drains or watercourses.

13. Disposal considerations

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Waste Disposal Method
Do not allow material to contaminate ground water systems. Incinerate or otherwise dispose of waste material in accordance with Federal, State, Provincial, and local requirements. Do not incinerate in closed containers.

14. Transport information

International transport regulations

IMDG (Sea transport)	
UN number:	1263
Proper shipping name:	PAINT
Hazard Class:	3
Subsidiary Hazard Class:	Not applicable.
Packing group:	II
Marine Pollutant:	yes [trizinc bis(orthophosphate)]
ICAO/IATA (Air transport)	
UN number:	1263
Proper shipping name:	PAINT
Hazard Class:	3
Subsidiary Hazard Class:	Not applicable.
Packing group:	II
DOT	
UN number:	1263
Proper shipping name:	PAINT
Hazard Class:	3
Subsidiary Hazard Class:	Not applicable.
Packing group:	II
Marine Pollutant:	yes [trizinc bis(orthophosphate)]
EmS:	F-E,S-E

Matters needing attention for transportation
Confirm that there is no breakage, corrosion, or leakage from the container before shipping. Be sure to prevent damage to cargo by loading so as to avoid falling, dropping, or collapse. Ship in appropriate containers with denotation of the content in accordance with the relevant statutes and rules.

15. Regulatory information

TSCA Status
In compliance with TSCA Inventory requirements for commercial purposes.

DSL Status
All components of the mixture are listed on the DSL.

Photochemical Reactivity
Photochemically reactive

US. California Safe Drinking Water & Toxic Enforcement Act (Proposition 65)
WARNING! This product contains a chemical known to the State of California to cause cancer.

Regulatory information

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CAS #	Ingredient	EPCRA 302	EPCRA TPQ	EPCRA RQ	EPCRA 311 - 312	EPCRA 313	CERCLA RQ(lbs)	CAA HAP
7727-43-7	Barium sulfate	N	NR	NR	,A,C,F,N,R	N	NR	N
7779-90-0	Zinc phosphate	N	NR	NR	,A,C,F,N,R	Y	NR	N
13463-67-7	Titanium dioxide	N	NR	NR	,A,C,F,N,R	N	NR	N
14807-96-6	Hydrous magnesium silicate	N	NR	NR	C	N	NR	N
1332-58-7	Kaolin	N	NR	NR	,A,C,F,N,R	N	NR	N
25068-38-6	Bisphenol-epichlorohydrin type polymer	N	NR	NR	,A,C,F,N,R	N	NR	N
25068-38-6	Epoxy resin	N	NR	NR	,A,C,F,N,R	N	NR	N
110-12-3	Methyl isoamyl ketone	N	NR	NR	C	N	NR	N
540-88-5	T-butyl acetate	N	NR	NR	A,C,F	N	NA	N
71-36-3	N-butyl alcohol	N	NR	NR	,A,C,F,N,R	Y	5,000	N
1330-20-7	Xylene	N	NR	NR	,A,C,F,N,R	Y	100	Y
67-64-1	Acetone	N	NR	NR	A,C,F	N	5,000	N
No information available.	Acrylic polymer	N	NR	NR	NA	N	NR	N
64742-94-5	Aromatic hydrocarbon	N	NR	NR	,A,C,F,N,R	N	NR	N
1317-65-3	Limestone (calcium carbonate)	N	NR	NR	,A,C,F,N,R	N	NR	N
100-41-4	Ethylbenzene	N	NR	NR	A,C,F	Y	1,000	Y
91-20-3	Naphthalene	N	NR	NR	A,C,F	Y	100	Y

Key:

EPCRA	Emergency Planning and Community Right-to-know Act (aka Title III, SARA)
302	Extremely hazardous substances
311/312 Categories	F = Fire Hazard R = Reactivity Hazard P = Pressure Related Hazard A = Acute Hazard C = Chronic Hazard
313 Information	Section 313 Supplier Notification - The chemicals listed above with a 'Y' in the 313 column are subject to reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know act of 1986 and of 40 CFR 372.
CERCLA	Comprehensive Emergency Response, Compensation and Liability Act of 1980.
HAP	Listed as a Clean Air Act Hazardous Air Pollutant.
TPQ	Threshold Planning Quantity.
RQ	Reportable Quantity
NA	not available
NR	not regulated

16. Other information

HMIS rating H: 2 F: 3 R: 0

Glossary of Terms:

ACGIH	American Conference of Governmental Industrial Hygienists.
IARC	International Agency for Research on Cancer.
NTP	National Toxicology Program.
OEL	Occupational Exposure Limit
OSHA	Occupational Safety and Health Administration.
STEL	Short term exposure limit.
TWA	Time-weighted average.
PNOR	Particles not otherwise regulated.
PNOC	Particles not otherwise classified.

NOTE: The list (above) of glossary terms may be modified.

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The document reflects information provided to Axalta Coating Systems by its suppliers. Information is accurate to the best of our knowledge and is subject to change as new data is received by Axalta Coating Systems. Persons receiving this information should make their own determination as to its suitability for their purposes prior to use. The information on this Material Safety Data Sheet relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process.
SDS prepared by:
Axalta Coating Systems Regulatory Affairs
Report version

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1. Identification of the substance/mixture and of the company/undertaking

Product name	HYBRID PRIMER MEDIUM ACTIVATOR	
Product code	FGP32765	140506
Intended use	Hardener for professional use	
	Axalta Coating Systems, LLC Applied Corporate Center 50 Applied Card Way, Suite 300 US Glen Mills, PA 19342	
Telephone	Product information Medical emergency Transportation emergency	(855) 6-AXALTA (855) 274-5698 (800) 424-9300 (CHEMTREC)

2. Hazards identification

This preparation is hazardous per the following GHS criteria

GHS-Classification

Flammable liquids	Category 2
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 1
Skin sensitisation	Category 1
Toxicity for reproduction	Category 2

Endpoints which are ""not classified"", ""cannot classified"" and ""not applicable"" are not shown

GHS-Labelling

Hazard symbols

Signal word: Danger

Hazard statements:
Highly flammable liquid and vapour.
Causes skin irritation.
Causes serious eye damage.
May cause an allergic skin reaction.
Suspected of damaging fertility or the unborn child.

Precautionary statements:
Contaminated work clothing should not be allowed out of the workplace.
Ground/bond container and receiving equipment.
Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
Keep container tightly closed.
Obtain special instructions before use.
Take precautionary measures against static discharge.
Use explosion-proof electrical/ventilating/lighting equipment.
Use only non-sparking tools.
Wear protective gloves/protective clothing/eye protection/face protection.
Avoid breathing dust/ vapours/ spray.
IF exposed or concerned: Get medical advice/ attention.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.

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IF ON SKIN: Wash with plenty of soap and water.
If skin irritation or rash occurs: Get medical advice/ attention.
Immediately call a POISON CENTER or doctor/ physician.
Specific treatment (see supplemental first aid instructions on this label).
Take off contaminated clothing and wash before reuse.
Store in a well-ventilated place. Keep cool.
Store locked up.
Dispose of contents/container in accordance with local regulations.

Other hazards which do not result in classification
None known.

The following percentage of the mixture consists of ingredient(s) with unknown acute toxicity:
1.1 %

3. Composition/information on ingredients

Mixture of synthetic resins and solvents

Components

CAS-No.	Chemical Name	Concentration	GHS Hazardous
No information available.	Epoxy resin	20 - 30%	
71-36-3	N-butyl alcohol	13%	√
78-83-1	Isobutyl alcohol	4 - 15%	√
67-63-0	Isopropyl alcohol	4 - 15%	√
1760-24-3	N-beta-(aminoethyl)-gamma-aminopropyltrimethoxysilane	4 - 15%	√
107-98-2	Propylene glycol methyl ether	4 - 15%	√
1330-20-7	Xylene	4%	√
90-72-2	2,4,6- tri((dimethylamino)methyl) phenol	1 - 4%	√
110-43-0	Methyl amyl ketone	1 - 4%	√
110-12-3	Methyl isoamyl ketone	1 - 4%	√
69-72-7	Salicylic acid	1 - 4%	√
No information available.	Siloxanes and silane esters	1 - 5%	
8032-32-4	Vm&p naphtha	1 - 4%	√
100-41-4	Ethylbenzene	0.9%	√

OSHA Hazardous: Yes

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4. First aid measures

Eye contact
Remove contact lenses. Irrigate copiously with clean, fresh water for at least 15 minutes, holding the eyelids apart. Seek medical advice.

Skin contact
Do NOT use solvents or thinners. Take off all contaminated clothing immediately. Wash skin thoroughly with soap and water or use recognized skin cleanser. If skin irritation persists, call a physician.

Inhalation
Avoid inhalation of vapour or mist. Move to fresh air in case of accidental inhalation of vapours. If breathing is irregular or stopped, administer artificial respiration. If unconscious place in recovery position and seek medical advice. If symptoms persist, call a physician.

Ingestion
If swallowed, seek medical advice immediately and show this container or label. Do NOT induce vomiting. Keep at rest.

Most important Symptoms/effects, acute and delayed

Inhalation
May cause nose and throat irritation. May cause nervous system depression characterized by the following progressive steps: headache, dizziness, nausea, staggering gait, confusion, unconsciousness. Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage.

Ingestion
May result in gastrointestinal distress.

Skin or eye contact
May cause irritation or burning of the eyes. Repeated or prolonged liquid contact may cause skin irritation with discomfort and dermatitis.

Indication of immediate medical attention and special treatment needed if necessary
No data available on the product. See section 3 and 11 for hazardous ingredients found in the product.

5. Firefighting measures

Suitable extinguishing media
Universal aqueous film-forming foam, Carbon dioxide (CO2), Dry chemical

Extinguishing media which shall not be used for safety reasons
High volume water jet

Hazardous combustion products
CO, CO2, smoke, and oxides of any heavy metals that are reported in "Composition, Information on Ingredients" section.

Fire and Explosion Hazards
Flammable liquid. Vapor/air mixture will burn when an ignition source is present.

Special Protective Equipment and Fire Fighting Procedures
Full protective flameproof clothing should be worn as appropriate. Wear self contained breathing apparatus for fire fighting if necessary. In the event of fire, cool tanks with water spray. Do not allow run-off from fire fighting to enter public sewer systems or public waterways.

6. Accidental release measures

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Procedures for cleaning up spills or leaks
Ventilate area. Remove sources of ignition. Prevent skin and eye contact and breathing of vapor. Wear a properly fitted air-purifying respirator with organic vapor cartridges (NIOSH approved TC-23C), eye protection, gloves and protective clothing. Confine, remove with inert absorbent, and dispose of properly.

Environmental precautions
Do not let product enter drains. Notify the respective authorities in accordance with local law in the case of contamination of rivers, lakes or waste water systems.

7. Handling and storage

Precautions for safe handling
Observe label precautions. Keep away from heat, sparks, flame, static discharge and other sources of ignition. VAPORS MAY CAUSE FLASH FIRE. Close container after each use. Ground containers when pouring. Do not transfer contents to bottles or unlabeled containers. Wash thoroughly after handling and before eating or smoking. Do not store above 120 deg F.
If material is a coating: do not sand, flame cut, braze or weld dry coating without a NIOSH approved air purifying respirator with particulate filters or appropriate ventilation, and gloves. Combustible dust clouds may be created where operations produce fine material (dust). Avoid formation of significant deposits of material as they may become airborne and form combustible dust clouds. Build up of fine material should be cleaned using gentle sweeping or vacuuming in accordance with best practices. Cleaning methods (e.g. compressed air) which can generate potentially combustible dust clouds should not be used.

Advice on protection against fire and explosion
Solvent vapours are heavier than air and may spread along floors. Vapors may form explosive mixtures with air and will burn when an ignition source is present. Always keep in containers of same material as the original one. Never use pressure to empty container: container is not a pressure vessel. The accumulation of contaminated rags may result in spontaneous combustion. Good housekeeping standards and regular safe removal of waste materials will minimize the risks of spontaneous combustion and other fire hazards.

Storage
Requirements for storage areas and containers
Observe label precautions. Store in a dry, well ventilated place away from sources of heat, ignition and direct sunlight. No smoking. Prevent unauthorized access. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Advice on common storage
Store separately from oxidizing agents and strongly alkaline and strongly acidic materials.

OSHA/NFPA Storage Classification: IB

8. Exposure controls/personal protection

Engineering controls and work practices
Provide adequate ventilation. This should be achieved by a good general extraction and -if practically feasible- by the use of a local exhaust ventilation. If these are not sufficient to maintain concentrations of particulates and solvent vapour below the OEL, suitable respiratory protection must be worn.

National occupational exposure limits

CAS-No.	Chemical Name	Source	Time	Type	Value	Note
71-36-3	N-butyl alcohol	ACGIH	8 hr	TWA	20 ppm	
		OSHA	8 hr	TWA	100 ppm	
		Dupont	15 min	TWA	50 ppm	
			8 & 12 hour	TWA	25 ppm	
78-83-1	Isobutyl alcohol	ACGIH	8 hr	TWA	50 ppm	

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CAS-No.	Chemical Name	Source	Time	Type	Value	Note
		OSHA	8 hr	TWA	100 ppm	
107-98-2	Propylene glycol methyl ether	ACGIH	15 min	STEL	150 ppm	
			8 hr	TWA	100 ppm	
1330-20-7	Xylene	ACGIH	15 min	STEL	150 ppm	
			8 hr	TWA	100 ppm	
		OSHA	8 hr	TWA	100 ppm	
		Dupont	8 & 12 hour	TWA	100 ppm	
110-43-0	Methyl amyl ketone	ACGIH	8 hr	TWA	50 ppm	
		OSHA	8 hr	TWA	100 ppm	
110-12-3	Methyl isoamyl ketone	ACGIH	8 hr	TWA	20 ppm	
69-72-7	Salicylic acid	OSHA	8 hr	TWA	15 mg/m3	Total Dust
			8 hr	TWA	5 mg/m3	Respirable Dust
8032-32-4	Vm&p naphtha	ACGIH	8 hr	TWA	300 ppm	
		Dupont	8 hr	TWA	100 ppm	
100-41-4	Ethylbenzene	ACGIH	8 hr	TWA	20 ppm	
		OSHA	8 hr	TWA	100 ppm	
		Dupont	8 & 12 hour	TWA	25 ppm	

** TWA = Time-weighted average.
STEL = Short term exposure limit.

Protective equipment
Personal protective equipment should be worn to prevent contact with eyes, skin or clothing.

Respiratory protection
Do not breathe vapors or mists. Wear an appropriate, properly fitted NIOSH approved respirator during application and until all vapors and spray mists are exhausted unless air monitoring demonstrates vapor/mist levels are below applicable limits. If respirators are required, use a properly fitted air-purifying respirator with organic vapor cartridges (NIOSH approved TC-23C) and particulate filter (NIOSH TC-84A). In confined spaces, or in situations where continuous spray operations are typical, or if proper air-purifying respirator fit is not possible, wear a positive pressure, supplied-air respirator (NIOSH TC-19C). In all cases, follow respirator manufacturer's directions for respirator use.'

Eye protection
Desirable in all industrial situations. Goggles are preferred to prevent eye irritation. If safety glasses are substituted, include splash guard or side shields.

Skin and body protection
Neoprene gloves and coveralls are recommended.

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Hygiene measures
Wash skin thoroughly with soap and water or use recognized skin cleanser. Do NOT use solvents or thinners.

Environmental exposure controls
Do not let product enter drains. For ecological information, refer to Ecological Information Section 12.

9. Physical and chemical properties

Appearance

Form: liquid Colour: amber

Flash point	60 °F	
Ignition temperature	232 °C	
Lower Explosive Limit	1.4 %	
Upper Explosive Limit	13.7 %	
Evapouration rate	Slower than Ether	
Vapor pressure of principal solvent	13.1 hPa	
Water solubility	appreciable	
Vapor density of principal solvent (Air = 1)	2.55	
Approx. Boiling Range	83 °C	
Approx. Freezing Range	Not applicable.	
Gallon Weight (lbs/gal)	7.37	
Specific Gravity	0.88	
Percent Volatile By Volume	67.22%	
Percent Volatile By Weight	62.17%	
Percent Solids By Volume	32.78%	
Percent Solids By Weight	37.83%	
pH (waterborne systems only)	No data available.	
Partition coefficient: n-octanol/water	no data available	
Ignition temperature	232 °C	DIN 51794
Decomposition temperature		
Viscosity (23 °C)	Not applicable.	ISO 2431-1993
VOC* less exempt (lbs/gal)	4.6	
VOC* as packaged (lbs/gal)	4.5	

* VOC less exempt (theoretical) and VOC as packaged (theoretical) are based upon the VOC of the packaged material at the point of manufacture.

10. Stability and reactivity

Stability
Stable

Conditions to avoid
Stable under recommended storage conditions.

Materials to avoid
None reasonably foreseeable.

Hazardous decomposition products
When exposed to high temperatures may produce hazardous decomposition products such as carbon monoxide and dioxide, smoke, oxides of nitrogen.

Hazardous Polymerization
Will not occur.

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Sensitivity to Static Discharge
Solvent vapors in air may explode if static grounding and bonding is not used during transfer of this product.

Sensitivity to Mechanical Impact
None known.

11. Toxicological information

Information on likely routes of exposure

Inhalation
May cause nose and throat irritation. May cause nervous system depression characterized by the following progressive steps: headache, dizziness, nausea, staggering gait, confusion, unconsciousness. Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage.

Ingestion
May result in gastrointestinal distress.

Skin or eye contact
May cause irritation or burning of the eyes. Repeated or prolonged liquid contact may cause skin irritation with discomfort and dermatitis.

Delayed and immediate effects and also chronic effects from short and long term exposure:

Acute oral toxicity
Not classified according to GHS criteria

Acute dermal toxicity
not hazardous

Acute inhalation toxicity
not hazardous

% of unknown composition 1.1 %

Skin corrosion/irritation

n-butanol	Category 2
iso-butanol	Category 2
propan-2-ol	Category 3
1-methoxy-2-propanol	Category 3
xylene	Category 2
2,4,6-tris(dimethylaminomethyl)phenol	Category 1C
heptan-2-one	Category 2
5-methylhexan-2-one	Category 3
salicylic acid	Category 1C
low boiling point naphtha (<0,1% benzene)	Category 2
ethylbenzene	Category 3

Serious eye damage/eye irritation

n-butanol	Category 1
iso-butanol	Category 1
propan-2-ol	Category 2A
N-(3-trimethoxysilyl)propyl)ethylenediamine	Category 2A
1-methoxy-2-propanol	Category 2B

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xylene	Category 2A
2,4,6-tris(dimethylaminomethyl)phenol	Category 1
heptan-2-one	Category 2B
5-methylhexan-2-one	Category 2A
salicylic acid	Category 1
low boiling point naphtha (<0,1% benzene)	Category 2A
ethylbenzene	Category 2B

Respiratory sensitisation
Not classified according to GHS criteria

Skin sensitisation

N-(3-trimethoxysilyl)propyl)ethylenediamine	Category 1

Germ cell mutagenicity
Not classified according to GHS criteria

Carcinogenicity
Not classified according to GHS criteria

Toxicity for reproduction

salicylic acid	Category 2

Target Organ Systemic Toxicant - Single exposure
Not classified according to GHS criteria

Target Organ Systemic Toxicant - Repeated exposure
Not classified according to GHS criteria

Aspiration toxicity
Not classified according to GHS criteria

Numerical measures of toxicity (acute toxicity estimation (ATE),etc.)
No information available.

Symptoms related to the physical, chemical and toxicological characteristics
Exposure to component solvents vapours concentration in excess of the stated occupational exposure limit may result in adverse health effect such as mucous membrane and respiratory system irritation and adverse effect on kidney, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness. Through skin resorbtion, solvents can cause some of the effects described here. Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin resulting in non-allergic contact dermatitis and absorption through the skin. The liquid splashed in the eyes may cause irritation and reversible damage.

Whether the hazardous chemical is listed by NTP, IARC or OSHA

ethylbenzene	IARC 2B

12. Ecological information

There are no data available on the product itself. The product should not be allowed to enter drains or watercourses.

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13. Disposal considerations

Waste Disposal Method
Do not allow material to contaminate ground water systems. Incinerate or otherwise dispose of waste material in accordance with Federal, State, Provincial, and local requirements. Do not incinerate in closed containers.

14. Transport information

International transport regulations

IMDG (Sea transport)	
UN number:	1263
Proper shipping name:	PAINT RELATED MATERIAL
Hazard Class:	3
Subsidiary Hazard Class:	Not applicable.
Packing group:	II
Marine Pollutant:	no
ICAO/IATA (Air transport)	
UN number:	1263
Proper shipping name:	PAINT RELATED MATERIAL
Hazard Class:	3
Subsidiary Hazard Class:	Not applicable.
Packing group:	II
DOT	
UN number:	1263
Proper shipping name:	PAINT RELATED MATERIAL
Hazard Class:	3
Subsidiary Hazard Class:	Not applicable.
Packing group:	II
Marine Pollutant:	no
EmS:	F-E,S-E

Matters needing attention for transportation
Confirm that there is no breakage, corrosion, or leakage from the container before shipping. Be sure to prevent damage to cargo by loading so as to avoid falling, dropping, or collapse. Ship in appropriate containers with denotation of the content in accordance with the relevant statutes and rules.

15. Regulatory information

TSCA Status
In compliance with TSCA Inventory requirements for commercial purposes.

DSL Status
Product is not DSL listed because one or more ingredients are not on the DSL inventory.

Photochemical Reactivity
Non-photochemically reactive

US. California Safe Drinking Water & Toxic Enforcement Act (Proposition 65)
WARNING! This product contains a chemical known to the State of California to cause cancer.

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Regulatory information

CAS #	Ingredient	EPCRA 302	EPCRA TPQ	EPCRA RQ	EPCRA 311 - 312	EPCRA 313	CERCLA RQ(lbs)	CAA HAP
No information available.	Epoxy resin	N	NR	NR	NA	N	NR	N
71-36-3	N-butyl alcohol	N	NR	NR	,A,C,F,N,R	Y	5,000	N
78-83-1	Isobutyl alcohol	N	NR	NR	A,C,F	N	NR	N
67-63-0	Isopropyl alcohol	N	NR	NR	,A,C,F,N,R	N	NR	N
1760-24-3	N-beta-(aminoethyl)-gamma-aminopropyltrimethoxysilane	N	NR	NR	A,C	N	NR	N
107-98-2	Propylene glycol methyl ether	N	NR	NR	C,F	N	NR	N
1330-20-7	Xylene	N	NR	NR	,A,C,F,N,R	Y	100	Y
90-72-2	2,4,6-tri((dimethylamino)methyl) phenol	N	NR	NR	,A,C,F,N,R	N	NR	N
110-43-0	Methyl amyl ketone	N	NR	NR	A,C,F	N	NR	N
110-12-3	Methyl isoamyl ketone	N	NR	NR	C	N	NR	N
69-72-7	Salicylic acid	N	NR	NR	,A,C,F,N,R	N	NR	N
No information available.	Siloxanes and silane esters	N	NR	NR	NA	N	NR	N
8032-32-4	Vm&p naphtha	N	NR	NR	A,C,F	N	NR	N
100-41-4	Ethylbenzene	N	NR	NR	A,C,F	Y	1,000	Y

Key:

EPCRA	Emergency Planning and Community Right-to-know Act (aka Title III, SARA)
302	Extremely hazardous substances
311/312 Categories	F = Fire Hazard R = Reactivity Hazard P = Pressure Related Hazard A = Acute Hazard C = Chronic Hazard
313 Information	Section 313 Supplier Notification - The chemicals listed above with a 'Y' in the 313 column are subject to reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know act of 1986 and of 40 CFR 372.
CERCLA	Comprehensive Emergency Response, Compensation and Liability Act of 1980.
HAP	Listed as a Clean Air Act Hazardous Air Pollutant.
TPQ	Threshold Planning Quantity.
RQ	Reportable Quantity
NA	not available
NR	not regulated

16. Other information

HMIS rating H: 3 F: 3 R: 2

Glossary of Terms:

ACGIH	American Conference of Governmental Industrial Hygienists.
IARC	International Agency for Research on Cancer.
NTP	National Toxicology Program.
OEL	Occupational Exposure Limit
OSHA	Occupational Safety and Health Administration.
STEL	Short term exposure limit.
TWA	Time-weighted average.
PNOR	Particles not otherwise regulated.
PNOC	Particles not otherwise classified.

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NOTE: The list (above) of glossary terms may be modified.

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SDS prepared by:
Axalta Coating Systems Regulatory Affairs
Report version

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1. Identification of the substance/mixture and of the company/undertaking

Product name	GRAY URETHANE SANDABLE PRIMER	
Product code	1220S	140514
Intended use	Coating for professional use	
	Axalta Coating Systems, LLC Applied Corporate Center 50 Applied Card Way, Suite 300 US Glen Mills, PA 19342	
Telephone	Product information Medical emergency Transportation emergency	(855) 6-AXALTA (855) 274-5698 (800) 424-9300 (CHEMTREC)

2. Hazards identification

This preparation is hazardous per the following GHS criteria

GHS-Classification

Flammable liquids	Category 2
Serious eye damage/eye irritation	Category 2A
Toxicity for reproduction	Category 2

Endpoints which are ""not classified"", ""cannot classified"" and ""not applicable"" are not shown

GHS-Labelling

Hazard symbols	
Signal word	Danger
Hazard statements	Highly flammable liquid and vapour. Causes serious eye irritation. Suspected of damaging fertility or the unborn child.
Precautionary statements	Wear eye protection/ face protection. Ground/bond container and receiving equipment. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Keep container tightly closed. Obtain special instructions before use. Take precautionary measures against static discharge. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Wear protective gloves/ eye protection/ face protection. IF exposed or concerned: Get medical advice/ attention. If eye irritation persists: Get medical advice/ attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower. Store in a well-ventilated place. Keep cool. Store locked up. Dispose of contents/container in accordance with local regulations.

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Other hazards which do not result in classification
None known.

The following percentage of the mixture consists of ingredient(s) with unknown acute toxicity:
0 %

3. Composition/information on ingredients

Mixture of synthetic resins, pigments, and solvents

Components

CAS-No.	Chemical Name	Concentration	GHS Hazardous
No information available.	Acrylic polymer	20 - 30%	
13463-67-7	Titanium dioxide	11.0%	
1332-58-7	Kaolin	10 - 20%	
112-07-2	Ethylene glycol monobutyl ether acetate	6%	√
14807-96-6	Hydrous magnesium silicate	5 - 10%	
1317-65-3	Limestone (calcium carbonate)	5 - 10%	
67-64-1	Acetone	4 - 15%	√
110-43-0	Methyl amyl ketone	4 - 15%	√
78-93-3	Methyl ethyl ketone	4 - 15%	√
1314-13-2	Zinc oxide	3%	√
141-78-6	Ethyl acetate	1 - 4%	√
1333-86-4	Carbon black	0.2%	

OSHA Hazardous: Yes
* Assigned CAS No. - An official CAS No. does not exist. The CAS No. shown is for a similar chemical.

4. First aid measures

Eye contact
Remove contact lenses. Irrigate copiously with clean, fresh water for at least 15 minutes, holding the eyelids apart. Seek medical advice.

Skin contact
Do NOT use solvents or thinners. Take off all contaminated clothing immediately. Wash skin thoroughly with soap and water or use recognized skin cleanser. If skin irritation persists, call a physician.

Inhalation
Avoid inhalation of vapour or mist. Move to fresh air in case of accidental inhalation of vapours. If breathing is irregular or stopped, administer artificial respiration. If unconscious place in recovery position and seek medical advice. If symptoms persist, call a physician.

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Ingestion
If swallowed, seek medical advice immediately and show this container or label. Do NOT induce vomiting. Keep at rest.

Most important Symptoms/effects, acute and delayed

Inhalation
May cause nose and throat irritation. May cause nervous system depression characterized by the following progressive steps: headache, dizziness, nausea, staggering gait, confusion, unconsciousness. Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage. If this product mixed with an isocyanate activator/hardener (see MSDS for the activator), the following health effects may apply: Exposure to isocyanates may cause respiratory sensitization. This effect may be permanent. Symptoms include an asthma-like reaction with shortness of breath, wheezing, cough or permanent lung sensitization. This effect may be delayed for several hours after exposure. Repeated overexposure to isocyanates may cause a decrease in lung function, which may be permanent. Individuals with lung or breathing problems or prior reactions to isocyanates must not be exposed to vapors or spray mist of this product.

Ingestion
May result in gastrointestinal distress.

Skin or eye contact
May cause irritation or burning of the eyes. Repeated or prolonged liquid contact may cause skin irritation with discomfort and dermatitis. If this product is mixed with an isocyanate, skin contact may cause sensitization.

Indication of immediate medical attention and special treatment needed if necessary
No data available on the product. See section 3 and 11 for hazardous ingredients found in the product.

5. Firefighting measures

Suitable extinguishing media
Universal aqueous film-forming foam, Carbon dioxide (CO2), Dry chemical

Extinguishing media which shall not be used for safety reasons
High volume water jet

Hazardous combustion products
CO, CO2, smoke, and oxides of any heavy metals that are reported in "Composition, Information on Ingredients" section.

Fire and Explosion Hazards
Flammable liquid. Vapor/air mixture will burn when an ignition source is present.

Special Protective Equipment and Fire Fighting Procedures
Full protective flameproof clothing should be worn as appropriate. Wear self contained breathing apparatus for fire fighting if necessary. In the event of fire, cool tanks with water spray. Do not allow run-off from fire fighting to enter public sewer systems or public waterways.

6. Accidental release measures

Procedures for cleaning up spills or leaks
Ventilate area. Remove sources of ignition. Prevent skin and eye contact and breathing of vapor. If the material contains, or is mixed with an isocyanate activator/hardener: Wear a positive-pressure, supplied-air respirator (NIOSH approved TC-19C), eye protection, gloves and protective clothing. Pour liquid decontamination solution over the spill and allow to sit at least 10 minutes. Typical decontamination solutions for isocyanate containing materials are: 20% Surfactant (Tergitol TMN 10) and 80% Water OR 0 -10% Ammonia, 2-5% Detergent and Water (balance) Pressure can be generated. Do not seal waste containers for 48 hours to allow C02 to vent. After 48 hours, material may be sealed and disposed of properly. If material does not contain or is not mixed with an isocyanate activator/hardener: Wear a properly fitted air-purifying respirator with organic vapor cartridges (NIOSH approved TC-23C), eye protection, gloves and protective clothing. Confine, remove with inert absorbent, and dispose of properly.

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Environmental precautions
Do not let product enter drains. Notify the respective authorities in accordance with local law in the case of contamination of rivers, lakes or waste water systems.

7. Handling and storage

Precautions for safe handling
Observe label precautions. Keep away from heat, sparks, flame, static discharge and other sources of ignition. VAPORS MAY CAUSE FLASH FIRE. Close container after each use. Ground containers when pouring. Do not transfer contents to bottles or unlabeled containers. Wash thoroughly after handling and before eating or smoking. Do not store above 120 deg F.
If material is a coating: do not sand, flame cut, braze or weld dry coating without a NIOSH approved air purifying respirator with particulate filters or appropriate ventilation, and gloves. Combustible dust clouds may be created where operations produce fine material (dust). Avoid formation of significant deposits of material as they may become airborne and form combustible dust clouds. Build up of fine material should be cleaned using gentle sweeping or vacuuming in accordance with best practices. Cleaning methods (e.g. compressed air) which can generate potentially combustible dust clouds should not be used.

Advice on protection against fire and explosion
Solvent vapours are heavier than air and may spread along floors. Vapors may form explosive mixtures with air and will burn when an ignition source is present. Always keep in containers of same material as the original one. Never use pressure to empty container: container is not a pressure vessel. The accumulation of contaminated rags may result in spontaneous combustion. Good housekeeping standards and regular safe removal of waste materials will minimize the risks of spontaneous combustion and other fire hazards.

Storage
Requirements for storage areas and containers
Observe label precautions. Store in a dry, well ventilated place away from sources of heat, ignition and direct sunlight. No smoking. Prevent unauthorized access. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Advice on common storage
Store separately from oxidizing agents and strongly alkaline and strongly acidic materials.

OSHA/NFPA Storage Classification: IB

8. Exposure controls/personal protection

Engineering controls and work practices
Provide adequate ventilation. This should be achieved by a good general extraction and -if practically feasible- by the use of a local exhaust ventilation. If these are not sufficient to maintain concentrations of particulates and solvent vapour below the OEL, suitable respiratory protection must be worn.

National occupational exposure limits

CAS-No.	Chemical Name	Source	Time	Type	Value	Note
13463-67-7	Titanium dioxide	OSHA	8 hr	TWA	15 mg/m3	Total Dust
		Dupont	8 & 12 hour	TWA	10 mg/m3	Total Dust
			8 & 12 hour	TWA	5 mg/m3	Respirable Dust
1332-58-7	Kaolin	ACGIH	8 hr	TWA	2 mg/m3	Respirable Dust
		OSHA		TWA	15 mg/m3	Total Dust
				TWA	5 mg/m3	Respirable Dust

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CAS-No.	Chemical Name	Source	Time	Type	Value	Note
112-07-2	Ethylene glycol monobutyl ether acetate	ACGIH	8 hr	TWA	20 ppm	
		Dupont	8 & 12 hour	TWA	20 ppm	
14807-96-6	Hydrous magnesium silicate	ACGIH	8 hr	TWA	2 mg/m3	Respirable Dust
		Dupont	8 & 12 hour	TWA	0.5 mg/m3	Respirable Dust
1317-65-3	Limestone (calcium carbonate)	ACGIH	8 hr	TWA	10 mg/m3	
		OSHA	8 hr	TWA	15 mg/m3	Total Dust
			8 hr	TWA	5 mg/m3	Respirable Dust
67-64-1	Acetone	ACGIH	15 min	STEL	750 ppm	
			8 hr	TWA	500 ppm	
		OSHA	8 hr	TWA	1,000 ppm	
		Dupont	8 & 12 hour	TWA	500 ppm	
110-43-0	Methyl amyl ketone	ACGIH	8 hr	TWA	50 ppm	
		OSHA	8 hr	TWA	100 ppm	
78-93-3	Methyl ethyl ketone	ACGIH	15 min	STEL	300 ppm	
			8 hr	TWA	200 ppm	
		OSHA	8 hr	TWA	200 ppm	
		Dupont	15 min	TWA	300 ppm	
			8 & 12 hour	TWA	200 ppm	
1314-13-2	Zinc oxide	ACGIH	15 min	STEL	10 mg/m3	Respirable Dust
			8 hr	TWA	2 mg/m3	Respirable Dust
		OSHA	8 hr	TWA	15 mg/m3	Total Dust
			8 hr	TWA	5 mg/m3	Respirable Dust
141-78-6	Ethyl acetate	ACGIH	8 hr	TWA	400 ppm	
		OSHA	8 hr	TWA	400 ppm	
1333-86-4	Carbon black	ACGIH	8 hr	TWA	3 mg/m3	
		OSHA	8 hr	TWA	3.5 mg/m3	

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CAS-No.	Chemical Name	Source	Time	Type	Value	Note
		Dupont	8 & 12 hour	TWA	0.5 mg/m3	

** TWA = Time-weighted average.
STEL = Short term exposure limit.

Protective equipment
Personal protective equipment should be worn to prevent contact with eyes, skin or clothing.

Respiratory protection
Do not breathe vapors or mists. Wear an appropriate, properly fitted NIOSH approved respirator while mixing activator with paint, during application and until all vapors and spray mists are exhausted unless air monitoring demonstrates vapor/mist levels are below applicable limits. If respirators are required and this product is used with an isocyanate activator/hardener, wear a positive-pressure, supplied-air respirator (NIOSH approved TC-19C). Otherwise a properly fitted air-purifying respirator with organic vapor cartridges (NIOSH TC-23C) and particulate filter (NIOSH TC-84A) may be used. Follow respirator manufacturer's directions for respirator use. Do not permit anyone without protection in the painting area. Refer to the hardener/activator label instructions and MSDS for further information.'Individuals with history of lung or breathing problems or prior reaction to isocyanates should not use or be exposed to vapor or spray mist if product is mixed with isocyanate activators/hardeners.'

Eye protection
Desirable in all industrial situations. Goggles are preferred to prevent eye irritation. If safety glasses are substituted, include splash guard or side shields.

Skin and body protection
Neoprene gloves and coveralls are recommended.

Hygiene measures
Wash skin thoroughly with soap and water or use recognized skin cleanser. Do NOT use solvents or thinners.

Environmental exposure controls
Do not let product enter drains. For ecological information, refer to Ecological Information Section 12.

9. Physical and chemical properties

Appearance

Form: liquid Colour: grey

Flash point	50 °F
Ignition temperature	375 °C
Lower Explosive Limit	0.5 %
Upper Explosive Limit	12.8 %
Evapouration rate	Slower than Ether
Vapor pressure of principal solvent	32.0 hPa
Water solubility	appreciable
Vapor density of principal solvent (Air = 1)	3.9
Approx. Boiling Range	78 °C
Approx. Freezing Range	-95 – -65 °C
Gallon Weight (lbs/gal)	10.82
Specific Gravity	1.30
Percent Volatile By Volume	56.59%
Percent Volatile By Weight	36.38%
Percent Solids By Volume	43.41%
Percent Solids By Weight	63.62%

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pH (waterborne systems only)	No data available.	
Partition coefficient: n-octanol/water	no data available	
Ignition temperature	375 °C	DIN 51794
Decomposition temperature		
Viscosity (23 °C)	Not applicable.	ISO 2431-1993
VOC* less exempt (lbs/gal)	3.5	
VOC* as packaged (lbs/gal)	3.1	

* VOC less exempt (theoretical) and VOC as packaged (theoretical) are based upon the VOC of the packaged material at the point of manufacture.

10. Stability and reactivity

Stability
Stable

Conditions to avoid
Stable under recommended storage conditions.

Materials to avoid
None reasonably foreseeable.

Hazardous decomposition products
When exposed to high temperatures may produce hazardous decomposition products such as carbon monoxide and dioxide, smoke, oxides of nitrogen.

Hazardous Polymerization
Will not occur.

Sensitivity to Static Discharge
Solvent vapors in air may explode if static grounding and bonding is not used during transfer of this product.

Sensitivity to Mechanical Impact
None known.

11. Toxicological information

Information on likely routes of exposure

Inhalation
May cause nose and throat irritation. May cause nervous system depression characterized by the following progressive steps: headache, dizziness, nausea, staggering gait, confusion, unconsciousness. Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage. If this product mixed with an isocyanate activator/hardener (see MSDS for the activator), the following health effects may apply: Exposure to isocyanates may cause respiratory sensitization. This effect may be permanent. Symptoms include an asthma-like reaction with shortness of breath, wheezing, cough or permanent lung sensitization. This effect may be delayed for several hours after exposure. Repeated overexposure to isocyanates may cause a decrease in lung function, which may be permanent. Individuals with lung or breathing problems or prior reactions to isocyanates must not be exposed to vapors or spray mist of this product.

Ingestion
May result in gastrointestinal distress.

Skin or eye contact
May cause irritation or burning of the eyes. Repeated or prolonged liquid contact may cause skin irritation with discomfort and dermatitis.

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Delayed and immediate effects and also chronic effects from short and long term exposure:

Acute oral toxicity
Not classified according to GHS criteria

Acute dermal toxicity
not hazardous

Acute inhalation toxicity
not hazardous

% of unknown composition 0 %

Skin corrosion/irritation
Not classified according to GHS criteria

Serious eye damage/eye irritation

acetone	Category 2A
heptan-2-one	Category 2B
butanone	Category 2A
ethyl acetate	Category 2A

Respiratory sensitisation
Not classified according to GHS criteria

Skin sensitisation
Not classified according to GHS criteria

Germ cell mutagenicity
Not classified according to GHS criteria

Carcinogenicity
Not classified according to GHS criteria

Toxicity for reproduction
No data available.

Target Organ Systemic Toxicant - Single exposure
Not classified according to GHS criteria

Target Organ Systemic Toxicant - Repeated exposure
Not classified according to GHS criteria

Aspiration toxicity
Not classified according to GHS criteria

Numerical measures of toxicity (acute toxicity estimation (ATE),etc.)
No information available.

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Symptoms related to the physical, chemical and toxicological characteristics
Exposure to component solvents vapours concentration in excess of the stated occupational exposure limit may result in adverse health effect such as mucous membrane and respiratory system irritation and adverse effect on kidney, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness. Through skin resorbtion, solvents can cause some of the effects described here. Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin resulting in non-allergic contact dermatitis and absorption through the skin. The liquid splashed in the eyes may cause irritation and reversible damage.

Whether the hazardous chemical is listed by NTP, IARC or OSHA

Titanium dioxide	IARC 2B
carbon black	IARC 2B
Titanium dioxide	IARC 2B

12. Ecological information

There are no data available on the product itself. The product should not be allowed to enter drains or watercourses.

13. Disposal considerations

Waste Disposal Method
Do not allow material to contaminate ground water systems. Incinerate or otherwise dispose of waste material in accordance with Federal, State, Provincial, and local requirements. Do not incinerate in closed containers.

14. Transport information

International transport regulations

IMDG (Sea transport)	
UN number:	1263
Proper shipping name:	PAINT
Hazard Class:	3
Subsidiary Hazard Class:	Not applicable.
Packing group:	II
Marine Pollutant:	yes [zinc oxide]
ICAO/IATA (Air transport)	
UN number:	1263
Proper shipping name:	PAINT
Hazard Class:	3
Subsidiary Hazard Class:	Not applicable.
Packing group:	II
DOT	
UN number:	1263
Proper shipping name:	PAINT
Hazard Class:	3
Subsidiary Hazard Class:	Not applicable.
Packing group:	II
Marine Pollutant:	yes [zinc oxide]
EmS:	F-E,S-E

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Matters needing attention for transportation
Confirm that there is no breakage, corrosion, or leakage from the container before shipping. Be sure to prevent damage to cargo by loading so as to avoid falling, dropping, or collapse. Ship in appropriate containers with denotation of the content in accordance with the relevant statutes and rules.

15. Regulatory information

TSCA Status
In compliance with TSCA Inventory requirements for commercial purposes.

DSL Status
All components of the mixture are listed on the DSL.

Photochemical Reactivity
Non-photochemically reactive

US. California Safe Drinking Water & Toxic Enforcement Act (Proposition 65)
WARNING! This product contains a chemical known to the State of California to cause cancer.

Regulatory information

		EPCRA					CERCLA	CAA
CAS #	Ingredient	302	TPQ	RQ	311 - 312	313	RQ(lbs)	HAP
No information available.	Acrylic polymer	N	NR	NR	NA	N	NR	N
13463-67-7	Titanium dioxide	N	NR	NR	,A,C,F,N,R	N	NR	N
1332-58-7	Kaolin	N	NR	NR	,A,C,F,N,R	N	NR	N
112-07-2	Ethylene glycol monobutyl ether acetate	N	NR	NR	A,C,F	Y	NR	Y
14807-96-6	Hydrous magnesium silicate	N	NR	NR	C	N	NR	N
1317-65-3	Limestone (calcium carbonate)	N	NR	NR	,A,C,F,N,R	N	NR	N
67-64-1	Acetone	N	NR	NR	A,C,F	N	5,000	N
110-43-0	Methyl amyl ketone	N	NR	NR	A,C,F	N	NR	N
78-93-3	Methyl ethyl ketone	N	NR	NR	A,C,F	N	5,000	N
1314-13-2	Zinc oxide	N	NR	NR	,A,C,F,N,R	Y	1,000	N
141-78-6	Ethyl acetate	N	NR	NR	C,F	N	NR	N
1333-86-4	Carbon black	N	NR	NR	,A,C,F,N,R	N	NR	N

Key:

EPCRA	Emergency Planning and Community Right-to-know Act (aka Title III, SARA)
302	Extremely hazardous substances
311/312 Categories	F = Fire Hazard R = Reactivity Hazard P = Pressure Related Hazard A = Acute Hazard C = Chronic Hazard
313 Information	Section 313 Supplier Notification - The chemicals listed above with a 'Y' in the 313 column are subject to reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know act of 1986 and of 40 CFR 372.
CERCLA	Comprehensive Emergency Response, Compensation and Liability Act of 1980.
HAP	Listed as a Clean Air Act Hazardous Air Pollutant.
TPQ	Threshold Planning Quantity.
RQ	Reportable Quantity
NA	not available
NR	not regulated

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16. Other information

HMIS rating H: 2 F: 3 R: 0

Glossary of Terms:

ACGIH	American Conference of Governmental Industrial Hygienists.
IARC	International Agency for Research on Cancer.
NTP	National Toxicology Program.
OEL	Occupational Exposure Limit
OSHA	Occupational Safety and Health Administration.
STEL	Short term exposure limit.
TWA	Time-weighted average.
PNOR	Particles not otherwise regulated.
PNOC	Particles not otherwise classified.

NOTE: The list (above) of glossary terms may be modified.

Notice from Axalta Coating Systems
The document reflects information provided to Axalta Coating Systems by its suppliers. Information is accurate to the best of our knowledge and is subject to change as new data is received by Axalta Coating Systems. Persons receiving this information should make their own determination as to its suitability for their purposes prior to use. The information on this Material Safety Data Sheet relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process.
SDS prepared by:
Axalta Coating Systems Regulatory Affairs
Report version

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1. Identification of the substance/mixture and of the company/undertaking

Product name	Low HAPS Activator	
Product code	194S™	110930
Intended use	Hardener for professional use	
	Axalta Coating Systems, LLC Applied Corporate Center 50 Applied Card Way, Suite 300 US Glen Mills, PA 19342	
Telephone	Product information Medical emergency Transportation emergency	(855) 6-AXALTA (855) 274-5698 (800) 424-9300 (CHEMTREC)

2. Hazards identification

This preparation is hazardous per the following GHS criteria

GHS-Classification

Flammable liquids	Category 2
Serious eye damage/eye irritation	Category 2A
Respiratory sensitisation	Category 1
Skin sensitisation	Category 1
Target Organ Systemic Toxicant - Single exposure	Category 3

Endpoints which are ""not classified"", ""cannot classified"" and "'not applicable"" are not shown

GHS-Labelling

Hazard symbols

Signal word: Danger

Hazard statements:
Highly flammable liquid and vapour.
Causes serious eye irritation.
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
May cause an allergic skin reaction.
May cause respiratory irritation.

Precautionary statements:
Contaminated work clothing should not be allowed out of the workplace.
Ground/bond container and receiving equipment.
In case of inadequate ventilation wear respiratory protection.
Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
Take precautionary measures against static discharge.
Use explosion-proof electrical/ventilating/lighting equipment.
Use only non-sparking tools.
Use only outdoors or in a well-ventilated area.
Wear protective gloves/protective clothing/eye protection/face protection.
Avoid breathing dust/ vapours/ spray.
IF exposed or if you feel unwell: Call a POISON CENTER or doctor/ physician.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
If experiencing respiratory symptoms: Call a POISON CENTER or doctor/ physician.
If eye irritation persists: Get medical advice/ attention.

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IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.
IF ON SKIN: Wash with plenty of soap and water.
If skin irritation or rash occurs: Get medical advice/ attention.
Specific treatment (see supplemental first aid instructions on this label).
Wash contaminated clothing before reuse.
Store in a well-ventilated place. Keep container tightly closed.
Store locked up.
Dispose of contents/container to .?.

Other hazards which do not result in classification
Contains isocyanates. See information supplied by the manufacturer.

The following percentage of the mixture consists of ingredient(s) with unknown acute toxicity:
0 %

3. Composition/information on ingredients

Mixture of synthetic resins and solvents

Components

CAS-No.	Chemical Name	Concentration
28182-81-2	Aliphatic polyisocyanate resin	
103-09-3	2-ethylhexyl acetate	
123-86-4	Butyl acetate	
141-78-6	Ethyl acetate	

Non-regulated ingredients 0.0 - 0.1%
OSHA Hazardous: Yes

4. First aid measures

Eye contact
Remove contact lenses. Irrigate copiously with clean, fresh water for at least 15 minutes, holding the eyelids apart. Seek medical advice.

Skin contact
Do NOT use solvents or thinners. Take off all contaminated clothing immediately. Wash skin thoroughly with soap and water or use recognized skin cleanser. If skin irritation persists, call a physician.

Inhalation
Avoid inhalation of vapour or mist. Move to fresh air in case of accidental inhalation of vapours. If breathing is irregular or stopped, administer artificial respiration. If unconscious place in recovery position and seek medical advice. If symptoms persist, call a physician.

Ingestion
If swallowed, seek medical advice immediately and show this container or label. Do NOT induce vomiting. Keep at rest.

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Most Important Symptoms/effects, acute and delayed

Inhalation
May cause nose and throat irritation. May cause nervous system depression characterized by the following progressive steps: headache, dizziness, nausea, staggering gait, confusion, unconsciousness. Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage. Exposure to isocyanates may cause respiratory sensitization. This effect may be permanent. Symptoms include an asthma-like reaction with shortness of breath, wheezing, cough or permanent lung sensitization. This effect may be delayed for several hours after exposure. Repeated overexposure to isocyanates may cause a decrease in lung function, which may be permanent. Individuals with lung or breathing problems or prior reactions to isocyanates must not be exposed to vapors or spray mist of this product.

Ingestion
May result in gastrointestinal distress.

Skin or eye contact
May cause irritation or burning of the eyes. Repeated or prolonged liquid contact may cause skin irritation with discomfort and dermatitis. Skin contact my cause skin sensitization.

Indication of immediate medical attention and special treatment needed if necessary
No data available on the product. See section 3 and 11 for hazardous ingredients found in the product.

5. Firefighting measures

Suitable extinguishing media
Universal aqueous film-forming foam, Carbon dioxide (CO2), Dry chemical

Extinguishing media which shall not be used for safety reasons
High volume water jet

Hazardous combustion products
CO, CO2, smoke, and oxides of any heavy metals that are reported in "Composition, Information on Ingredients" section.

Fire and Explosion Hazards
Flammable liquid. Vapor/air mixture will burn when an ignition source is present.

Special Protective Equipment and Fire Fighting Procedures
Full protective flameproof clothing should be worn as appropriate. Wear self contained breathing apparatus for fire fighting if necessary. In the event of fire, cool tanks with water spray. Do not allow run-off from fire fighting to enter public sewer systems or public waterways.

6. Accidental release measures

Procedures for cleaning up spills or leaks
Ventilate area. Remove sources of ignition. Do not breathe vapors. Do not get in eyes or on skin. Wear a positive-pressure, supplied-air respirator (NIOSH approved TC-19C), eye protection, gloves and protective clothing. Pour liquid decontamination solution over the spill and allow to sit at least 10 minutes. Typical decontamination solutions for isocyanate containing materials are: 20% Surfactant (Tergitol TM 10) and 80% Water OR 0-10% Ammonia, 2-5% Detergent and Water (balance) Confine and remove with inert absorbent. Pressure can be generated. Do not seal waste containers for 48 hours to allow C02 to vent. After 48 hours, material may be sealed and disposed of properly.

Environmental precautions
Do not let product enter drains. Notify the respective authorities in accordance with local law in the case of contamination of rivers, lakes or waste water systems.

7. Handling and storage

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Precautions for safe handling
Observe label precautions. Keep away from heat, sparks, flame, static discharge and other sources of ignition. VAPORS MAY CAUSE FLASH FIRE. Close container after each use. Ground containers when pouring. Do not transfer contents to bottles or unlabeled containers. Wash thoroughly after handling and before eating or smoking. Do not store above 120 deg F.
If material is a coating: do not sand, flame cut, braze or weld dry coating without a NIOSH approved air purifying respirator with particulate filters or appropriate ventilation, and gloves. Combustible dust clouds may be created where operations produce fine material (dust). Avoid formation of significant deposits of material as they may become airborne and form combustible dust clouds. Build up of fine material should be cleaned using gentle sweeping or vacuuming in accordance with best practices. Cleaning methods (e.g. compressed air) which can generate potentially combustible dust clouds should not be used.

Advice on protection against fire and explosion
Solvent vapours are heavier than air and may spread along floors. Vapors may form explosive mixtures with air and will burn when an ignition source is present. Always keep in containers of same material as the original one. Never use pressure to empty container: container is not a pressure vessel. The accumulation of contaminated rags may result in spontaneous combustion. Good housekeeping standards and regular safe removal of waste materials will minimize the risks of spontaneous combustion and other fire hazards.

Storage
Requirements for storage areas and containers
Observe label precautions. Store in a dry, well ventilated place away from sources of heat, ignition and direct sunlight. No smoking. Prevent unauthorized access. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Advice on common storage
Store separately from oxidizing agents, strongly alkaline and strongly acidic materials, amines, alcohols and water. Precautions should be taken to avoid exposure to atmospheric humidity or water. Evolution of CO2 in closed containers causes overpressure and produces a risk of bursting.

Additional information on storage conditions
Precautions should be taken to avoid exposure to atmospheric humidity or water. Humid air and/or water will produce carbon dioxide which will pressurize the container. Open drum carefully as content may be under pressure.

OSHA/NFPA Storage Classification: IB

8. Exposure controls/personal protection

Engineering controls and work practices
Provide adequate ventilation. Air-fed protective respiratory equipment must be worn by spray operator even when good ventilation is provided.

National occupational exposure limits

CAS-No.	Chemical Name	Source	Time	Type	Value	Note
28182-81-2	Aliphatic polyisocyanate resin	Supplier	8 hr	TWA	0.5 mg/m3	
123-86-4	Butyl acetate	ACGIH	15 min	STEL	200 ppm	
			8 hr	TWA	150 ppm	
		OSHA	8 hr	TWA	150 ppm	
141-78-6	Ethyl acetate	ACGIH	8 hr	TWA	400 ppm	
		OSHA	8 hr	TWA	400 ppm	

** TWA = Time-weighted average.
STEL = Short term exposure limit.

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Protective equipment
Personal protective equipment should be worn to prevent contact with eyes, skin or clothing.

Respiratory protection
Do not breathe vapors or mists. Wear a positive-pressure, supplied air respirator (NIOSH approved TC-19C), while mixing activator with paint, during application and until all vapors and spray mists are exhausted. Follow respirator manufacturer s directions for respirator use. Do not permit anyone without protection in the painting area. Refer to the hardener/activator label instructions for further information. Individuals with history of lung or breathing problems or prior reaction to isocyanates should not use or be exposed to vapor or spray mist.

Eye protection
Desirable in all industrial situations. Goggles are preferred to prevent eye irritation. If safety glasses are substituted, include splash guard or side shields.

Skin and body protection
Neoprene gloves and coveralls are recommended.

Hygiene measures
Wash skin thoroughly with soap and water or use recognized skin cleanser. Do NOT use solvents or thinners.

Environmental exposure controls
Do not let product enter drains. For ecological information, refer to Ecological Information Section 12.

9. Physical and chemical properties

Appearance

Form: liquid Colour: clear

Flash point	55 °F	
Ignition temperature	268 °C	
Lower Explosive Limit	1.7 %	
Upper Explosive Limit	11 %	
Evapouration rate	Slower than Ether	
Vapor pressure of principal solvent	14.5 hPa	
Water solubility	moderate	
Vapor density of principal solvent (Air = 1)	3	
Approx. Boiling Range	77 °C	
Approx. Freezing Range	Not applicable.	
Gallon Weight (lbs/gal)	9.05	
Specific Gravity	1.08	
Percent Volatile By Volume	30.47%	
Percent Volatile By Weight	25.00%	
Percent Solids By Volume	69.53%	
Percent Solids By Weight	75.00%	
pH (waterborne systems only)	not applicable	
Partition coefficient: n-octanol/water	no data available	
Ignition temperature	268 °C	DIN 51794
Decomposition temperature		
Viscosity (23 °C)	Not applicable.	ISO 2431-1993
VOC* less exempt (lbs/gal)	2.3	
VOC* as packaged (lbs/gal)	2.3	

* VOC less exempt (theoretical) and VOC as packaged (theoretical) are based upon the VOC of the packaged material at the point of manufacture.

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10. Stability and reactivity

Stability
Stable

Conditions to avoid
Stable under recommended storage conditions.

Materials to avoid
Keep away from oxidising agents and strongly acid or alkaline materials. Amines and alcohols cause exothermic reactions. Mixture reacts slowly with water resulting in evolution of CO2. Evolution of CO2 in closed containers causes overpressure and produces a risk of bursting.

Hazardous decomposition products
When exposed to high temperatures may produce hazardous decomposition products such as carbon monoxide and dioxide, smoke, oxides of nitrogen as well as hydrogen cyanide, amines, alcohols and water.

Hazardous Polymerization
Will not occur.

Sensitivity to Static Discharge
Solvent vapors in air may explode if static grounding and bonding is not used during transfer of this product.

Sensitivity to Mechanical Impact
None known.

11. Toxicological information

Information on likely routes of exposure

Inhalation
May cause nose and throat irritation. May cause nervous system depression characterized by the following progressive steps: headache, dizziness, nausea, staggering gait, confusion, unconsciousness. Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage. Exposure to isocyanates may cause respiratory sensitization. This effect may be permanent. Symptoms include an asthma-like reaction with shortness of breath, wheezing, cough or permanent lung sensitization. This effect may be delayed for several hours after exposure. Repeated overexposure to isocyanates may cause a decrease in lung function, which may be permanent. Individuals with lung or breathing problems or prior reactions to isocyanates must not be exposed to vapors or spray mist of this product.

Ingestion
May result in gastrointestinal distress.

Skin or eye contact
May cause irritation or burning of the eyes. Repeated or prolonged liquid contact may cause skin irritation with discomfort and dermatitis.

Delayed and immediate effects and also chronic effects from short and long term exposure:

Acute oral toxicity
not hazardous

Acute dermal toxicity
not hazardous

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Acute inhalation toxicity
Not classified according to GHS criteria

% of unknown composition 0 %

Skin corrosion/irritation
Not classified according to GHS criteria

Serious eye damage/eye irritation

2-ethylhexyl acetate	Category 2B
ethyl acetate	Category 2A

Respiratory sensitisation

Hexamethylene diisocyanate, oligomers	Category 1

Skin sensitisation

Hexamethylene diisocyanate, oligomers	Category 1

Germ cell mutagenicity
not hazardous

Carcinogenicity
Not classified according to GHS criteria

Toxicity for reproduction
Not classified according to GHS criteria

Target Organ Systemic Toxicant - Single exposure

- **Inhalation**

  reproductive organs ethyl acetate

Target Organ Systemic Toxicant - Repeated exposure
not hazardous

Aspiration toxicity
Not classified according to GHS criteria

Numerical measures of toxicity (acute toxicity estimation (ATE),etc.)
No information available.

Symptoms related to the physical, chemical and toxicological characteristics
Based on the properties of the isocyanate components and considering toxicological data on similar products, the following applies: This formulation may cause acute irritation and/or sensitization of the respiratory system leading to an asthmatic condition, wheeziness and a tightness of the chest. Sensitized persons may subsequently show asthmatic symptoms when exposed to atmospheric concentrations well below the OEL. Repeated exposure may lead to permanent respiratory disability. Exposure to component solvents vapours concentration in excess of the stated occupational exposure limit may result in adverse health effect such as mucous membrane and respiratory system irritation and adverse effect on kidney, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness. Through skin resorbtion, solvents can cause some of the effects described here. Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin resulting in non-allergic contact dermatitis and absorption through the

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skin. The liquid splashed in the eyes may cause irritation and reversible damage. Components of the product may be absorbed into the body through the skin.

Whether the hazardous chemical is listed by NTP, IARC or OSHA

12. Ecological information

There are no data available on the product itself. The product should not be allowed to enter drains or watercourses.

13. Disposal considerations

Waste Disposal Method
Do not allow material to contaminate ground water systems. Incinerate or otherwise dispose of waste material in accordance with Federal, State, Provincial, and local requirements. Do not incinerate in closed containers.

14. Transport information

International transport regulations

IMDG (Sea transport)	
UN number:	1263
Proper shipping name:	PAINT RELATED MATERIAL
Hazard Class:	3
Subsidiary Hazard Class:	Not applicable.
Packing group:	II
Marine Pollutant:	no
ICAO/IATA (Air transport)	
UN number:	1263
Proper shipping name:	PAINT RELATED MATERIAL
Hazard Class:	3
Subsidiary Hazard Class:	Not applicable.
Packing group:	II
DOT	
UN number:	1263
Proper shipping name:	PAINT RELATED MATERIAL
Hazard Class:	3
Subsidiary Hazard Class:	Not applicable.
Packing group:	II
Marine Pollutant:	no
EmS:	F-E,S-E

Matters needing attention for transportation
Confirm that there is no breakage, corrosion, or leakage from the container before shipping. Be sure to prevent damage to cargo by loading so as to avoid falling, dropping, or collapse. Ship in appropriate containers with denotation of the content in accordance with the relevant statutes and rules.

15. Regulatory information

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TSCA Status
In compliance with TSCA Inventory requirements for commercial purposes.

DSL Status
All components of the mixture are listed on the DSL.

Photochemical Reactivity
Non-photochemically reactive

Regulatory information

		EPCRA					CERCLA	CAA
CAS #	Ingredient	302	TPQ	RQ	311 - 312	313	RQ(lbs)	HAP
28182-81-2	Aliphatic polyisocyanate resin	N	NR	NR	A,C,R	N	NR	N
103-09-3	2-ethylhexyl acetate	N	NR	NR	A,F	N	NR	N
123-86-4	Butyl acetate	N	NR	NR	A,C,F	N	NR	N
141-78-6	Ethyl acetate	N	NR	NR	C,F	N	NR	N

Key:

EPCRA	Emergency Planning and Community Right-to-know Act (aka Title III, SARA)
302	Extremely hazardous substances
311/312 Categories	F = Fire Hazard R = Reactivity Hazard P = Pressure Related Hazard A = Acute Hazard C = Chronic Hazard
313 Information	Section 313 Supplier Notification - The chemicals listed above with a 'Y' in the 313 column are subject to reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know act of 1986 and of 40 CFR 372.
CERCLA	Comprehensive Emergency Response, Compensation and Liability Act of 1980.
HAP	Listed as a Clean Air Act Hazardous Air Pollutant.
TPQ	Threshold Planning Quantity.
RQ	Reportable Quantity
NA	not available
NR	not regulated

16. Other information

HMIS rating H: 3 F: 3 R: 1

Glossary of Terms:

ACGIH	American Conference of Governmental Industrial Hygienists.
IARC	International Agency for Research on Cancer.
NTP	National Toxicology Program.
OEL	Occupational Exposure Limit
OSHA	Occupational Safety and Health Administration.
STEL	Short term exposure limit.
TWA	Time-weighted average.
PNOR	Particles not otherwise regulated.
PNOC	Particles not otherwise classified.

NOTE: The list (above) of glossary terms may be modified.

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knowledge and is subject to change as new data is received by Axalta Coating Systems. Persons receiving this information should make their own determination as to its suitability for their purposes prior to use. The information on this Material Safety Data Sheet relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process.
SDS prepared by:
Axalta Coating Systems Regulatory Affairs
Report version

Version	Changes
5.0	2, 3, 4, 5, 6, 7, 8, 9, 11, 14, 15, 16

Revision Date: 2014-11-18

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1. Identification of the substance/mixture and of the company/undertaking

Product name	FINAL KLEAN FAST-DRY CLEANER	
Product code	3901S	090917
Intended use	Solvent for professional use	
	Axalta Coating Systems, LLC Applied Corporate Center 50 Applied Card Way, Suite 300 US Glen Mills, PA 19342	
Telephone	Product information Medical emergency Transportation emergency	(855) 6-AXALTA (855) 274-5698 (800) 424-9300 (CHEMTREC)

2. Hazards identification

This preparation is hazardous per the following GHS criteria

GHS-Classification

Flammable liquids	Category 2
Skin corrosion/irritation	Category 2
Toxicity for reproduction	Category 2
Target Organ Systemic Toxicant - Single exposure	Category 3
Target Organ Systemic Toxicant - Repeated exposure	Category 2

Endpoints which are ""not classified"", ""cannot classified"" and ""not applicable"" are not shown

GHS-Labelling

Hazard symbols

Signal word: Danger

Hazard statements:
Highly flammable liquid and vapour.
Causes skin irritation.
Suspected of damaging fertility or the unborn child.
May cause drowsiness or dizziness.
May cause damage to organs through prolonged or repeated exposure.

Precautionary statements:
Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
Ground/bond container and receiving equipment.
Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
Obtain special instructions before use.
Take precautionary measures against static discharge.
Use explosion-proof electrical/ventilating/lighting equipment.
Use only non-sparking tools.
Use only outdoors or in a well-ventilated area.
Wear protective gloves/protective clothing/eye protection/face protection.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.
IF ON SKIN: Wash with plenty of soap and water.
If skin irritation occurs: Get medical advice/ attention.

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Specific treatment (see supplemental first aid instructions on this label).
Take off contaminated clothing and wash before reuse.
Store in a well-ventilated place. Keep container tightly closed.
Store locked up.
Dispose of contents/container in accordance with local regulations.

Other hazards which do not result in classification
None known.

The following percentage of the mixture consists of ingredient(s) with unknown acute toxicity:
0 %

3. Composition/information on ingredients

mixture of solvents

Components

CAS-No.	Chemical Name	Concentration	GHS Hazardous
142-82-5	Heptane	59 - 70%	√
8032-32-4	Vm&p naphtha	15 - 26%	√
108-88-3	Toluene	12%	√
108-87-2	Cyclohexane, methyl-	1 - 4%	√

OSHA Hazardous: Yes

4. First aid measures

Eye contact
Remove contact lenses. Irrigate copiously with clean, fresh water for at least 15 minutes, holding the eyelids apart. Seek medical advice.

Skin contact
Do NOT use solvents or thinners. Take off all contaminated clothing immediately. Wash skin thoroughly with soap and water or use recognized skin cleanser. If skin irritation persists, call a physician.

Inhalation
Avoid inhalation of vapour or mist. Move to fresh air in case of accidental inhalation of vapours. If breathing is irregular or stopped, administer artificial respiration. If unconscious place in recovery position and seek medical advice. If symptoms persist, call a physician.

Ingestion
If swallowed, seek medical advice immediately and show this container or label. Do NOT induce vomiting. Keep at rest.

Most Important Symptoms/effects, acute and delayed

Inhalation
May cause nose and throat irritation. May cause nervous system depression characterized by the following progressive steps: headache, dizziness, nausea, staggering gait, confusion, unconsciousness. Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage.

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Ingestion
May result in gastrointestinal distress.

Skin or eye contact
May cause irritation or burning of the eyes. Repeated or prolonged liquid contact may cause skin irritation with discomfort and dermatitis.

Indication of immediate medical attention and special treatment needed if necessary
No data available on the product. See section 3 and 11 for hazardous ingredients found in the product.

5. Firefighting measures

Suitable extinguishing media
Universal aqueous film-forming foam, Carbon dioxide (CO2), Dry chemical

Extinguishing media which shall not be used for safety reasons
High volume water jet

Hazardous combustion products
CO, CO2, smoke, and oxides of any heavy metals that are reported in "Composition, Information on Ingredients" section.

Fire and Explosion Hazards
Flammable liquid. Vapor/air mixture will burn when an ignition source is present.

Special Protective Equipment and Fire Fighting Procedures
Full protective flameproof clothing should be worn as appropriate. Wear self contained breathing apparatus for fire fighting if necessary. In the event of fire, cool tanks with water spray. Do not allow run-off from fire fighting to enter public sewer systems or public waterways.

6. Accidental release measures

Procedures for cleaning up spills or leaks
Ventilate area. Remove sources of ignition. Prevent skin and eye contact and breathing of vapor. Wear a properly fitted air-purifying respirator with organic vapor cartridges (NIOSH approved TC-23C), eye protection, gloves and protective clothing. Confine, remove with inert absorbent, and dispose of properly.

Environmental precautions
Do not let product enter drains. Notify the respective authorities in accordance with local law in the case of contamination of rivers, lakes or waste water systems.

7. Handling and storage

Precautions for safe handling
Observe label precautions. Keep away from heat, sparks, flame, static discharge and other sources of ignition. VAPORS MAY CAUSE FLASH FIRE. Close container after each use. Ground containers when pouring. Do not transfer contents to bottles or unlabeled containers. Wash thoroughly after handling and before eating or smoking. Do not store above 120 deg F.
If material is a coating: do not sand, flame cut, braze or weld dry coating without a NIOSH approved air purifying respirator with particulate filters or appropriate ventilation, and gloves. Combustible dust clouds may be created where operations produce fine material (dust). Avoid formation of significant deposits of material as they may become airborne and form combustible dust clouds. Build up of fine material should be cleaned using gentle sweeping or vacuuming in accordance with best practices. Cleaning methods (e.g. compressed air) which can generate potentially combustible dust clouds should not be used.

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Advice on protection against fire and explosion
Solvent vapours are heavier than air and may spread along floors. Vapors may form explosive mixtures with air and will burn when an ignition source is present. Always keep in containers of same material as the original one. Never use pressure to empty container: container is not a pressure vessel. The accumulation of contaminated rags may result in spontaneous combustion. Good housekeeping standards and regular safe removal of waste materials will minimize the risks of spontaneous combustion and other fire hazards.

Storage
Requirements for storage areas and containers
Observe label precautions. Store in a dry, well ventilated place away from sources of heat, ignition and direct sunlight. No smoking. Prevent unauthorized access. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Advice on common storage
Store separately from oxidizing agents and strongly alkaline and strongly acidic materials.

OSHA/NFPA Storage Classification: IB

8. Exposure controls/personal protection

Engineering controls and work practices
Provide adequate ventilation. This should be achieved by a good general extraction and -if practically feasible- by the use of a local exhaust ventilation. If these are not sufficient to maintain concentrations of particulates and solvent vapour below the OEL, suitable respiratory protection must be worn.

National occupational exposure limits

CAS-No.	Chemical Name	Source	Time	Type	Value	Note
142-82-5	Heptane	ACGIH	15 min	STEL	500 ppm	
			8 hr	TWA	400 ppm	
		OSHA	8 hr	TWA	500 ppm	
8032-32-4	Vm&p naphtha	ACGIH	8 hr	TWA	300 ppm	
		Dupont	8 hr	TWA	100 ppm	
108-88-3	Toluene	OSHA		CEIL	300 ppm	
			10 min	TWA	500 ppm	
			8 hr	TWA	200 ppm	
		Dupont	8 & 12 hour	TWA	20 ppm	Skin
108-87-2	Cyclohexane, methyl-	ACGIH	8 hr	TWA	400 ppm	
		OSHA	8 hr	TWA	400 ppm	

** STEL = Short term exposure limit.
TWA = Time-weighted average.
CEIL = Ceiling.

Protective equipment
Personal protective equipment should be worn to prevent contact with eyes, skin or clothing.

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Respiratory protection
Do not breathe vapors or mists. Wear an appropriate, properly fitted NIOSH approved respirator during application and until all vapors and spray mists are exhausted unless air monitoring demonstrates vapor/mist levels are below applicable limits. If respirators are required, use a properly fitted air-purifying respirator with organic vapor cartridges (NIOSH approved TC-23C) and particulate filter (NIOSH TC-84A). In confined spaces, or in situations where continuous spray operations are typical, or if proper air-purifying respirator fit is not possible, wear a positive pressure, supplied-air respirator (NIOSH TC-19C). In all cases, follow respirator manufacturer's directions for respirator use.'

Eye protection
Desirable in all industrial situations. Goggles are preferred to prevent eye irritation. If safety glasses are substituted, include splash guard or side shields.

Skin and body protection
Neoprene gloves and coveralls are recommended.

Hygiene measures
Wash skin thoroughly with soap and water or use recognized skin cleanser. Do NOT use solvents or thinners.

Environmental exposure controls
Do not let product enter drains. For ecological information, refer to Ecological Information Section 12.

9. Physical and chemical properties

Appearance

Form: liquid Colour: clear Odour: Characteristic Solvent Odor

Flash point	50 °F	
Ignition temperature	215 °C	
Lower Explosive Limit	0.9 %	
Upper Explosive Limit	10.2 %	
Evapouration rate	Slower than Ether	
Vapor pressure of principal solvent	43.8 hPa	
Water solubility	partly miscible	
Vapor density of principal solvent (Air = 1)	3.4	
Approx. Boiling Range	92 °C	
Approx. Freezing Range	Not applicable.	
Gallon Weight (lbs/gal)	6.07	
Specific Gravity	0.73	
Percent Volatile By Volume	100.00%	
Percent Volatile By Weight	100.00%	
Percent Solids By Volume	0.00%	
Percent Solids By Weight	0.00%	
pH (waterborne systems only)	not applicable	
Partition coefficient: n-octanol/water	no data available	
Ignition temperature	215 °C	DIN 51794
Decomposition temperature		
Viscosity (23 °C)	Not applicable.	ISO 2431-1993
VOC* less exempt (lbs/gal)	6.1	
VOC* as packaged (lbs/gal)	6.1	

* VOC less exempt (theoretical) and VOC as packaged (theoretical) are based upon the VOC of the packaged material at the point of manufacture.

10. Stability and reactivity

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Stability
Stable

Conditions to avoid
Stable under recommended storage conditions.

Materials to avoid
None reasonably foreseeable.

Hazardous decomposition products
When exposed to high temperatures may produce hazardous decomposition products such as carbon monoxide and dioxide, smoke, oxides of nitrogen.

Hazardous Polymerization
Will not occur.

Sensitivity to Static Discharge
Solvent vapors in air may explode if static grounding and bonding is not used during transfer of this product.

Sensitivity to Mechanical Impact
None known.

11. Toxicological information

Information on likely routes of exposure

Inhalation
May cause nose and throat irritation. May cause nervous system depression characterized by the following progressive steps: headache, dizziness, nausea, staggering gait, confusion, unconsciousness. Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage.

Ingestion
May result in gastrointestinal distress.

Skin or eye contact
May cause irritation or burning of the eyes. Repeated or prolonged liquid contact may cause skin irritation with discomfort and dermatitis.

Delayed and immediate effects and also chronic effects from short and long term exposure:

Acute oral toxicity
not hazardous

Acute dermal toxicity
Not classified according to GHS criteria

Acute inhalation toxicity
not hazardous

% of unknown composition 0 %

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Skin corrosion/irritation

heptane (mixture of isomers)	Category 2
low boiling point naphtha (<0,1% benzene)	Category 2
toluene	Category 2
methylcyclohexane	Category 2

Serious eye damage/eye irritation
Not classified according to GHS criteria

Respiratory sensitisation
Not classified according to GHS criteria

Skin sensitisation
Not classified according to GHS criteria

Germ cell mutagenicity
Not classified according to GHS criteria

Carcinogenicity
Not classified according to GHS criteria

Toxicity for reproduction

toluene	Category 2

Target Organ Systemic Toxicant - Single exposure

- **Skin Absorption**

  Narcotic effects toluene

- **Inhalation**

  Central nervous system low boiling point naphtha (<0,1% benzene)

  reproductive organs heptane (mixture of isomers)

Target Organ Systemic Toxicant - Repeated exposure
No data available.

Aspiration toxicity
Not classified according to GHS criteria

Numerical measures of toxicity (acute toxicity estimation (ATE),etc.)
No information available.

Symptoms related to the physical, chemical and toxicological characteristics
Exposure to component solvents vapours concentration in excess of the stated occupational exposure limit may result in adverse health effect such as mucous membrane and respiratory system irritation and adverse effect on kidney, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness. Through skin resorbtion, solvents can cause some of the effects described here. Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin resulting in non-allergic contact dermatitis and absorption through the skin. The liquid splashed in the eyes may cause irritation and reversible damage.

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Whether the hazardous chemical is listed by NTP, IARC or OSHA

12. Ecological information

There are no data available on the product itself. The product should not be allowed to enter drains or watercourses.

13. Disposal considerations

Waste Disposal Method
Do not allow material to contaminate ground water systems. Incinerate or otherwise dispose of waste material in accordance with Federal, State, Provincial, and local requirements. Do not incinerate in closed containers.

14. Transport information

International transport regulations

IMDG (Sea transport)	
UN number:	1263
Proper shipping name:	PAINT RELATED MATERIAL
Hazard Class:	3
Subsidiary Hazard Class:	Not applicable.
Packing group:	II
Marine Pollutant:	yes [heptane (mixture of isomers)]
ICAO/IATA (Air transport)	
UN number:	1263
Proper shipping name:	PAINT RELATED MATERIAL
Hazard Class:	3
Subsidiary Hazard Class:	Not applicable.
Packing group:	II
DOT	
UN number:	1263
Proper shipping name:	PAINT RELATED MATERIAL
Hazard Class:	3
Subsidiary Hazard Class:	Not applicable.
Packing group:	II
Marine Pollutant:	yes [heptane (mixture of isomers)]
EmS:	F-E,S-E

Matters needing attention for transportation
Confirm that there is no breakage, corrosion, or leakage from the container before shipping. Be sure to prevent damage to cargo by loading so as to avoid falling, dropping, or collapse. Ship in appropriate containers with denotation of the content in accordance with the relevant statutes and rules.

15. Regulatory information

TSCA Status
In compliance with TSCA Inventory requirements for commercial purposes.

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DSL Status
All components of the mixture are listed on the DSL.

Photochemical Reactivity
Non-photochemically reactive

US. California Safe Drinking Water & Toxic Enforcement Act (Proposition 65)
WARNING! This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

Regulatory information

		EPCRA					CERCLA	CAA
CAS #	Ingredient	302	TPQ	RQ	311 - 312	313	RQ(lbs)	HAP
142-82-5	Heptane	N	NR	NR	A,C,F	N	NR	N
8032-32-4	Vm&p naphtha	N	NR	NR	A,C,F	N	NR	N
108-88-3	Toluene	N	NR	NR	A,C,F	Y	1,000	Y
108-87-2	Cyclohexane, methyl-	N	NR	NR	,A,C,F,N,R	N	100	N

Key:

EPCRA	Emergency Planning and Community Right-to-know Act (aka Title III, SARA)
302	Extremely hazardous substances
311/312 Categories	F = Fire Hazard R = Reactivity Hazard P = Pressure Related Hazard A = Acute Hazard C = Chronic Hazard
313 Information	Section 313 Supplier Notification - The chemicals listed above with a 'Y' in the 313 column are subject to reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know act of 1986 and of 40 CFR 372.
CERCLA	Comprehensive Emergency Response, Compensation and Liability Act of 1980.
HAP	Listed as a Clean Air Act Hazardous Air Pollutant.
TPQ	Threshold Planning Quantity.
RQ	Reportable Quantity
NA	not available
NR	not regulated

16. Other information

HMIS rating H: 2 F: 3 R: 0

Glossary of Terms:

ACGIH	American Conference of Governmental Industrial Hygienists.
IARC	International Agency for Research on Cancer.
NTP	National Toxicology Program.
OEL	Occupational Exposure Limit
OSHA	Occupational Safety and Health Administration.
STEL	Short term exposure limit.
TWA	Time-weighted average.
PNOR	Particles not otherwise regulated.
PNOC	Particles not otherwise classified.

NOTE: The list (above) of glossary terms may be modified.

Notice from Axalta Coating Systems
The document reflects information provided to Axalta Coating Systems by its suppliers. Information is accurate to the best of our knowledge and is subject to change as new data is received by Axalta Coating Systems. Persons receiving this information should

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make their own determination as to its suitability for their purposes prior to use. The information on this Material Safety Data Sheet relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process.
SDS prepared by:
Axalta Coating Systems Regulatory Affairs
Report version

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1. Identification of the substance/mixture and of the company/undertaking

Product name	Low VOC Final Klean	
Product code	3909S	070321
Intended use	Solvent for professional use	
	Axalta Coating Systems, LLC Applied Corporate Center 50 Applied Card Way, Suite 300 US Glen Mills, PA 19342	
Telephone	Product information Medical emergency Transportation emergency	(855) 6-AXALTA (855) 274-5698 (800) 424-9300 (CHEMTREC)

2. Hazards identification

This preparation is hazardous per the following GHS criteria

GHS-Classification

Serious eye damage/eye irritation Category 2A

Endpoints which are ""not classified"", ""cannot classified"" and ""not applicable"" are not shown

GHS-Labelling

Hazard symbols

Signal word Warning

Hazard statements Causes serious eye irritation.

Precautionary statements Wear eye protection/ face protection.
If eye irritation persists: Get medical advice/ attention.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Other hazards which do not result in classification
Safety data sheet available for professional user on request.

The following percentage of the mixture consists of ingredient(s) with unknown acute toxicity:
0 %

3. Composition/information on ingredients

Mixture of synthetic resins and solvents as well as water

Components

CAS-No.	Chemical Name	Concentration	GHS Hazardous
7732-18-5	Water	90 - 100%	

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CAS-No.	Chemical Name	Concentration	GHS Hazardous
111-76-2	Ethylene glycol monobutyl ether	3%	✓
84133-50-6	Alkyloxy polyethylene oxyethanol	1 - 4%	✓
1119-40-0	Dimethyl glutarate	1 - 4%	✓

OSHA Hazardous: Yes

4. First aid measures

Eye contact
Remove contact lenses. Irrigate copiously with clean, fresh water for at least 15 minutes, holding the eyelids apart. Seek medical advice.

Skin contact
Do NOT use solvents or thinners. Take off all contaminated clothing immediately. Wash skin thoroughly with soap and water or use recognized skin cleanser. If skin irritation persists, call a physician.

Inhalation
Avoid inhalation of vapour or mist. Move to fresh air in case of accidental inhalation of vapours. If breathing is irregular or stopped, administer artificial respiration. If unconscious place in recovery position and seek medical advice. If symptoms persist, call a physician.

Ingestion
If swallowed, seek medical advice immediately and show this container or label. Do NOT induce vomiting. Keep at rest.

Most important Symptoms/effects, acute and delayed

Inhalation
May cause nose and throat irritation. May cause nervous system depression characterized by the following progressive steps: headache, dizziness, nausea, staggering gait, confusion, unconsciousness. Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage.

Ingestion
May result in gastrointestinal distress.

Skin or eye contact
May cause irritation or burning of the eyes. Repeated or prolonged liquid contact may cause skin irritation with discomfort and dermatitis.

Indication of immediate medical attention and special treatment needed if necessary
No data available on the product. See section 3 and 11 for hazardous ingredients found in the product.

5. Firefighting measures

Suitable extinguishing media
Universal aqueous film-forming foam, Carbon dioxide (CO2), Dry chemical

Extinguishing media which shall not be used for safety reasons
High volume water jet

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Hazardous combustion products
CO, CO2, smoke, and oxides of any heavy metals that are reported in "Composition, Information on Ingredients" section.

Fire and Explosion Hazards
Avoid heating above flash point.

Special Protective Equipment and Fire Fighting Procedures
Full protective flameproof clothing should be worn as appropriate. Wear self contained breathing apparatus for fire fighting if necessary. In the event of fire, cool tanks with water spray. Do not allow run-off from fire fighting to enter public sewer systems or public waterways.

6. Accidental release measures

Procedures for cleaning up spills or leaks
Ventilate area. If heated above the flashpoint, remove sources of ignition. Prevent skin and eye contact and breathing of vapor. Wear a properly fitted air-purifying respirator with organic vapor cartridges (NIOSH approved TC-23C), eye protection, gloves and protective clothing. Confine, remove with inert absorbent, and dispose of properly.

Environmental precautions
Do not let product enter drains. Notify the respective authorities in accordance with local law in the case of contamination of rivers, lakes or waste water systems.

7. Handling and storage

Precautions for safe handling
Observe label precautions. Close container after each use. If heated above its flash point, this must be handled as if it were a flammable liquid. Do not transfer contents to bottles or unlabeled containers. Wash thoroughly after handling and before eating or smoking. Do not freeze.
If material is a coating: do not sand, flame cut, braze or weld dry coating without a NIOSH approved air purifying respirator with particulate filters or appropriate ventilation, and gloves. Combustible dust clouds may be created where operations produce fine material (dust). Avoid formation of significant deposits of material as they may become airborne and form combustible dust clouds. Build up of fine material should be cleaned using gentle sweeping or vacuuming in accordance with best practices. Cleaning methods (e.g. compressed air) which can generate potentially combustible dust clouds should not be used.

Advice on protection against fire and explosion
Solvent vapours are heavier than air and may spread along floors. Vapors may form explosive mixtures with air and will burn when an ignition source is present. Always keep in containers of same material as the original one. Never use pressure to empty container: container is not a pressure vessel. The accumulation of contaminated rags may result in spontaneous combustion. Good housekeeping standards and regular safe removal of waste materials will minimize the risks of spontaneous combustion and other fire hazards.

Storage
Requirements for storage areas and containers
Observe label precautions. Store in a dry, well ventilated place away from sources of heat, ignition and direct sunlight. No smoking. Prevent unauthorized access. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Advice on common storage
Store separately from oxidizing agents and strongly alkaline and strongly acidic materials.

OSHA/NFPA Storage Classification: IIIB

8. Exposure controls/personal protection

Engineering controls and work practices
Provide adequate ventilation. This should be achieved by a good general extraction and -if practically feasible- by the use of a local exhaust ventilation. If these are not sufficient to maintain concentrations of particulates and solvent vapour below the OEL, suitable respiratory protection must be worn.

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National occupational exposure limits

CAS-No.	Chemical Name	Source	Time	Type	Value	Note
111-76-2	Ethylene glycol monobutyl ether	ACGIH	8 hr	TWA	20 ppm	
		OSHA	8 hr	TWA	50 ppm	Skin
		Dupont	8 & 12 hour	TWA	20 ppm	
1119-40-0	Dimethyl glutarate	Dupont	8 & 12 hour	TWA	10 mg/m3	

** TWA = Time-weighted average.

Protective equipment
Personal protective equipment should be worn to prevent contact with eyes, skin or clothing.

Respiratory protection
Do not breathe vapors or mists. Wear an appropriate, properly fitted NIOSH approved respirator during application and until all vapors and spray mists are exhausted unless air monitoring demonstrates vapor/mist levels are below applicable limits. If respirators are required, use a properly fitted air-purifying respirator with organic vapor cartridges (NIOSH approved TC-23C) and particulate filter (NIOSH TC-84A). In confined spaces, or in situations where continuous spray operations are typical, or if proper air-purifying respirator fit is not possible, wear a positive pressure, supplied-air respirator (NIOSH TC-19C). In all cases, follow respirator manufacturer's directions for respirator use.'

Eye protection
Desirable in all industrial situations. Goggles are preferred to prevent eye irritation. If safety glasses are substituted, include splash guard or side shields.

Skin and body protection
Neoprene gloves and coveralls are recommended.

Hygiene measures
Wash skin thoroughly with soap and water or use recognized skin cleanser. Do NOT use solvents or thinners.

Environmental exposure controls
Do not let product enter drains. For ecological information, refer to Ecological Information Section 12.

9. Physical and chemical properties

Appearance

Form: liquid Colour: clear

Flash point	> 200 °F
Ignition temperature	224 °C
Lower Explosive Limit	Not applicable.
Upper Explosive Limit	Not applicable.
Evapouration rate	Slower than Ether
Vapor pressure of principal solvent	0.0 hPa
Water solubility	appreciable
Vapor density of principal solvent (Air = 1)	0.6
Approx. Boiling Range	100 °C
Approx. Freezing Range	Not applicable.

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Gallon Weight (lbs/gal)	8.31	
Specific Gravity	1.00	
Percent Volatile By Volume	99.97%	
Percent Volatile By Weight	99.98%	
Percent Solids By Volume	0.03%	
Percent Solids By Weight	0.03%	
pH (waterborne systems only)	No data available.	
Partition coefficient: n-octanol/water	no data available	
Ignition temperature	224 °C	DIN 51794
Decomposition temperature		
Viscosity (23 °C)	Not applicable.	ISO 2431-1993
VOC* less exempt (lbs/gal)	8.2	
VOC* as packaged (lbs/gal)	0.5	

Does not sustain combustion.

* VOC less exempt (theoretical) and VOC as packaged (theoretical) are based upon the VOC of the packaged material at the point of manufacture.

10. Stability and reactivity

Stability
Stable

Conditions to avoid
Stable under recommended storage conditions.

Materials to avoid
None reasonably foreseeable.

Hazardous decomposition products
When exposed to high temperatures may produce hazardous decomposition products such as carbon monoxide and dioxide, smoke, oxides of nitrogen.

Hazardous Polymerization
Will not occur.

Sensitivity to Static Discharge
If heated above the flash point, solvent vapors in air may explode if static grounding and bonding is not used during transfer of this product.

Sensitivity to Mechanical Impact
None known.

11. Toxicological information

Information on likely routes of exposure

Inhalation
May cause nose and throat irritation. May cause nervous system depression characterized by the following progressive steps: headache, dizziness, nausea, staggering gait, confusion, unconsciousness. Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage.

Ingestion
May result in gastrointestinal distress.

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Skin or eye contact
May cause irritation or burning of the eyes. Repeated or prolonged liquid contact may cause skin irritation with discomfort and dermatitis.

Delayed and immediate effects and also chronic effects from short and long term exposure:

Acute oral toxicity
not hazardous

Acute dermal toxicity
not hazardous

Acute inhalation toxicity
not hazardous

% of unknown composition 0 %

Skin corrosion/irritation
Not classified according to GHS criteria

Serious eye damage/eye irritation

2-butoxyethanol	Category 2A
Alcohols, C12-14-secondary, ethoxylated	Category 1
Dimethyl glutarate	Category 2B

Respiratory sensitisation
Not classified according to GHS criteria

Skin sensitisation
Not classified according to GHS criteria

Germ cell mutagenicity
Not classified according to GHS criteria

Carcinogenicity
Not classified according to GHS criteria

Toxicity for reproduction
Not classified according to GHS criteria

Target Organ Systemic Toxicant - Single exposure
Not classified according to GHS criteria

Target Organ Systemic Toxicant - Repeated exposure
Not classified according to GHS criteria

Aspiration toxicity
Not classified according to GHS criteria

Numerical measures of toxicity (acute toxicity estimation (ATE),etc.)
No information available.

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Symptoms related to the physical, chemical and toxicological characteristics
No information available.

Whether the hazardous chemical is listed by NTP, IARC or OSHA

12. Ecological information

There are no data available on the product itself. The product should not be allowed to enter drains or watercourses.

13. Disposal considerations

Waste Disposal Method
Do not allow material to contaminate ground water systems. Incinerate or otherwise dispose of waste material in accordance with Federal, State, Provincial, and local requirements. Do not incinerate in closed containers.

14. Transport information

Not classified as dangerous in the meaning of transport regulations.

Matters needing attention for transportation
Confirm that there is no breakage, corrosion, or leakage from the container before shipping. Be sure to prevent damage to cargo by loading so as to avoid falling, dropping, or collapse. Ship in appropriate containers with denotation of the content in accordance with the relevant statutes and rules.

15. Regulatory information

TSCA Status
In compliance with TSCA Inventory requirements for commercial purposes.

DSL Status
All components of the mixture are listed on the DSL.

Photochemical Reactivity
Non-photochemically reactive

Regulatory Information

		EPCRA					CERCLA	CAA
CAS #	Ingredient	302	TPQ	RQ	311 - 312	313	RQ(lbs)	HAP
7732-18-5	Water	N	NR	NR	,A,C,F,N,R	N	NR	N
111-76-2	Ethylene glycol monobutyl ether	N	NR	NR	A,C,F	Y	NR	N
84133-50-6	Alkyloxy polyethylene oxyethanol	N	NR	NR	NA	N	NR	N
1119-40-0	Dimethyl glutarate	N	NR	NR	,A,C,F,N,R	N	NA	N

Key:

EPCRA	Emergency Planning and Community Right-to-know Act (aka Title III, SARA)
302	Extremely hazardous substances

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311/312 Categories	F = Fire Hazard R = Reactivity Hazard P = Pressure Related Hazard	A = Acute Hazard C = Chronic Hazard
313 Information	Section 313 Supplier Notification - The chemicals listed above with a 'Y' in the 313 column are subject to reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know act of 1986 and of 40 CFR 372.	
CERCLA	Comprehensive Emergency Response, Compensation and Liability Act of 1980.	
HAP	Listed as a Clean Air Act Hazardous Air Pollutant.	
TPQ	Threshold Planning Quantity.	
RQ	Reportable Quantity	
NA	not available	
NR	not regulated	

16. Other information

HMIS rating H: 0 F: 1 R: 0

Glossary of Terms:

ACGIH	American Conference of Governmental Industrial Hygienists.
IARC	International Agency for Research on Cancer.
NTP	National Toxicology Program.
OEL	Occupational Exposure Limit
OSHA	Occupational Safety and Health Administration.
STEL	Short term exposure limit.
TWA	Time-weighted average.
PNOR	Particles not otherwise regulated.
PNOC	Particles not otherwise classified.

NOTE: The list (above) of glossary terms may be modified.

Notice from Axalta Coating Systems
The document reflects information provided to Axalta Coating Systems by its suppliers. Information is accurate to the best of our knowledge and is subject to change as new data is received by Axalta Coating Systems. Persons receiving this information should make their own determination as to its suitability for their purposes prior to use. The information on this Material Safety Data Sheet relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process.
SDS prepared by:
Axalta Coating Systems Regulatory Affairs
Report version

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1. Identification of the substance/mixture and of the company/undertaking

Product name	Lacquer Thinner	
Product code	106™	140915
Intended use	Thinner for professionnal use	
	Axalta Coating Systems, LLC Applied Corporate Center 50 Applied Card Way, Suite 300 US Glen Mills, PA 19342	
Telephone	Product information Medical emergency Transportation emergency	(855) 6-AXALTA (855) 274-5698 (800) 424-9300 (CHEMTREC)

2. Hazards identification

This preparation is hazardous per the following GHS criteria

GHS-Classification

Flammable liquids	Category 2
Acute oral toxicity	Category 4
Acute dermal toxicity	Category 4
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2A
Toxicity for reproduction	Category 2
Target Organ Systemic Toxicant - Single exposure	Category 1
Target Organ Systemic Toxicant - Repeated exposure	Category 2

Endpoints which are ""not classified"", ""cannot classified"" and "'not applicable"" are not shown

GHS-Labelling

Hazard symbols

Signal word: Danger

Hazard statements:
Highly flammable liquid and vapour.
Harmful if swallowed.
Harmful in contact with skin.
Causes skin irritation.
Causes serious eye irritation.
Suspected of damaging fertility or the unborn child.
Causes damage to organs.
May cause damage to organs through prolonged or repeated exposure.

Precautionary statements:
Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
Do not eat, drink or smoke when using this product.
Ground/bond container and receiving equipment.
Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
Keep container tightly closed.
Obtain special instructions before use.
Take precautionary measures against static discharge.
Use explosion-proof electrical/ventilating/lighting equipment.

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Use only non-sparking tools.
Wear protective gloves/protective clothing/eye protection/face protection.
IF exposed: Call a POISON CENTER or doctor/ physician.
If eye irritation persists: Get medical advice/ attention.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.
IF ON SKIN: Wash with plenty of soap and water.
If skin irritation occurs: Get medical advice/ attention.
IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician.
Specific treatment (see supplemental first aid instructions on this label).
Take off contaminated clothing and wash before reuse.
Store in a well-ventilated place. Keep cool.
Store locked up.
Dispose of contents/container to .?.

Other hazards which do not result in classification
None known.

The following percentage of the mixture consists of ingredient(s) with unknown acute toxicity:
0 %

3. Composition/information on ingredients

mixture of solvents

Components

CAS-No.	Chemical Name	Concentration
108-88-3	Toluene	30%
67-64-1	Acetone	
67-56-1	Methyl alcohol	20%
8032-32-4	Vm&p naphtha	
1330-20-7	Xylene	3%
100-41-4	Ethylbenzene	0.8%

Non-regulated ingredients 0.1 - 1.0%
OSHA Hazardous: Yes

4. First aid measures

Eye contact
Remove contact lenses. Irrigate copiously with clean, fresh water for at least 15 minutes, holding the eyelids apart. Seek medical advice.

Skin contact
Do NOT use solvents or thinners. Take off all contaminated clothing immediately. Wash skin thoroughly with soap and water or use recognized skin cleanser. If skin irritation persists, call a physician.

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Inhalation
Avoid inhalation of vapour or mist. Move to fresh air in case of accidental inhalation of vapours. If breathing is irregular or stopped, administer artificial respiration. If unconscious place in recovery position and seek medical advice. If symptoms persist, call a physician.

Ingestion
If swallowed, seek medical advice immediately and show this container or label. Do NOT induce vomiting. Keep at rest.

Most Important Symptoms/effects, acute and delayed

Inhalation
May cause nose and throat irritation. May cause nervous system depression characterized by the following progressive steps: headache, dizziness, nausea, staggering gait, confusion, unconsciousness. Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage.

Ingestion
May result in gastrointestinal distress.

Skin or eye contact
May cause irritation or burning of the eyes. Repeated or prolonged liquid contact may cause skin irritation with discomfort and dermatitis.

Indication of immediate medical attention and special treatment needed if necessary
No data available on the product. See section 3 and 11 for hazardous ingredients found in the product.

5. Firefighting measures

Suitable extinguishing media
Universal aqueous film-forming foam, Carbon dioxide (CO2), Dry chemical

Extinguishing media which shall not be used for safety reasons
High volume water jet

Hazardous combustion products
CO, CO2, smoke, and oxides of any heavy metals that are reported in "Composition, Information on Ingredients" section.

Fire and Explosion Hazards
Flammable liquid. Vapor/air mixture will burn when an ignition source is present.

Special Protective Equipment and Fire Fighting Procedures
Full protective flameproof clothing should be worn as appropriate. Wear self contained breathing apparatus for fire fighting if necessary. In the event of fire, cool tanks with water spray. Do not allow run-off from fire fighting to enter public sewer systems or public waterways.

6. Accidental release measures

Procedures for cleaning up spills or leaks
Ventilate area. Remove sources of ignition. Prevent skin and eye contact and breathing of vapor. Wear a properly fitted air-purifying respirator with organic vapor cartridges (NIOSH approved TC-23C), eye protection, gloves and protective clothing. Confine, remove with inert absorbent, and dispose of properly.

Environmental precautions
Do not let product enter drains. Notify the respective authorities in accordance with local law in the case of contamination of rivers, lakes or waste water systems.

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7. Handling and storage

Precautions for safe handling
Observe label precautions. Keep away from heat, sparks, flame, static discharge and other sources of ignition. VAPORS MAY IGNITE EXPLOSIVELY. Vapors may spread long distances. Prevent buildup of vapors. Extinguish all pilot lights and turn off heaters, non-explosion proof electrical equipment and other sources of ignition during and after use and until all vapors are gone. Close container after each use. Ground containers when pouring. Wash thoroughly after handling and before eating or smoking. Do not store above 120 deg F.
If material is a coating: do not sand, flame cut, braze or weld dry coating without a NIOSH approved air purifying respirator with particulate filters or appropriate ventilation, and gloves. Combustible dust clouds may be created where operations produce fine material (dust). Avoid formation of significant deposits of material as they may become airborne and form combustible dust clouds. Build up of fine material should be cleaned using gentle sweeping or vacuuming in accordance with best practices. Cleaning methods (e.g. compressed air) which can generate potentially combustible dust clouds should not be used.

Advice on protection against fire and explosion
Solvent vapours are heavier than air and may spread along floors. Vapors may form explosive mixtures with air and will burn when an ignition source is present. Always keep in containers of same material as the original one. Never use pressure to empty container: container is not a pressure vessel. The accumulation of contaminated rags may result in spontaneous combustion. Good housekeeping standards and regular safe removal of waste materials will minimize the risks of spontaneous combustion and other fire hazards.

Storage
Requirements for storage areas and containers
Observe label precautions. Store in a dry, well ventilated place away from sources of heat, ignition and direct sunlight. No smoking. Prevent unauthorized access. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Advice on common storage
Store separately from oxidizing agents and strongly alkaline and strongly acidic materials.

OSHA/NFPA Storage Classification: IB

8. Exposure controls/personal protection

Engineering controls and work practices
Provide adequate ventilation. This should be achieved by a good general extraction and -if practically feasible- by the use of a local exhaust ventilation. If these are not sufficient to maintain concentrations of particulates and solvent vapour below the OEL, suitable respiratory protection must be worn.

National occupational exposure limits

CAS-No.	Chemical Name	Source	Time	Type	Value	Note
108-88-3	Toluene	ACGIH	8 hr	TWA	20 ppm	
		OSHA		CEIL	300 ppm	
			10 min	TWA	500 ppm	
			8 hr	TWA	200 ppm	
		Dupont	8 & 12 hour	TWA	50 ppm	Skin
67-64-1	Acetone	ACGIH	15 min	STEL	750 ppm	
			8 hr	TWA	500 ppm	
		OSHA	8 hr	TWA	1,000 ppm	
		Dupont	8 & 12 hour	TWA	500 ppm	

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CAS-No.	Chemical Name	Source	Time	Type	Value	Note
67-56-1	Methyl alcohol	ACGIH	15 min	STEL	250 ppm	Skin
			8 hr	TWA	200 ppm	Skin
		OSHA	8 hr	TWA	200 ppm	
		Dupont	8 & 12 hour	TWA	200 ppm	Skin
8032-32-4	Vm&p naphtha	ACGIH	8 hr	TWA	300 ppm	
		Dupont	8 hr	TWA	100 ppm	
1330-20-7	Xylene	ACGIH	15 min	STEL	150 ppm	
			8 hr	TWA	100 ppm	
		OSHA	8 hr	TWA	100 ppm	
		Dupont	8 & 12 hour	TWA	100 ppm	
100-41-4	Ethylbenzene	ACGIH	8 hr	TWA	20 ppm	
		OSHA	8 hr	TWA	100 ppm	
		Dupont	8 & 12 hour	TWA	25 ppm	

** TWA = Time-weighted average.
CEIL = Ceiling.
STEL = Short term exposure limit.

Protective equipment
Personal protective equipment should be worn to prevent contact with eyes, skin or clothing.

Respiratory protection
Do not breathe vapors or mists. Wear a properly fitted air-purifying respirator with organic vapor cartridges (NIOSH approved TC-23C) and particulate filter (NIOSH TC-84A) during application and until all vapors and spray mists are exhausted. In confined spaces, or in situations where continuous spray operations are typical, or if proper air-purifying respirator fit is not possible, wear a positive pressure, supplied-air respirator (NIOSH TC-19C). In all cases, follow respirator manufacturer's directions for respirator use. Do not permit anyone without protection in the painting area.

Eye protection
Desirable in all industrial situations. Goggles are preferred to prevent eye irritation. If safety glasses are substituted, include splash guard or side shields.

Skin and body protection
Neoprene gloves and coveralls are recommended.

Hygiene measures
Wash skin thoroughly with soap and water or use recognized skin cleanser. Do NOT use solvents or thinners.

Environmental exposure controls
Do not let product enter drains. For ecological information, refer to Ecological Information Section 12.

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9. Physical and chemical properties

Appearance

Form: liquid Colour: clear

Flash point	14 °F	
Ignition temperature	232 °C	
Lower Explosive Limit	0.9 %	
Upper Explosive Limit	36.5 %	
Evapouration rate	Slower than Ether	
Vapor pressure of principal solvent	123.3 hPa	
Water solubility	appreciable	
Vapor density of principal solvent (Air = 1)	2	
Approx. Boiling Range	64 °C	
Approx. Freezing Range	Not applicable.	
Gallon Weight (lbs/gal)	6.78	
Specific Gravity	0.81	
Percent Volatile By Volume	100.00%	
Percent Volatile By Weight	100.00%	
Percent Solids By Volume	0.00%	
Percent Solids By Weight	0.00%	
pH (waterborne systems only)	No data available.	
Partition coefficient: n-octanol/water	no data available	
Ignition temperature	232 °C	DIN 51794
Decomposition temperature		
Viscosity (23 °C)	Not applicable.	ISO 2431-1993
VOC* less exempt (lbs/gal)	6.9	
VOC* as packaged (lbs/gal)	4.4	

* VOC less exempt (theoretical) and VOC as packaged (theoretical) are based upon the VOC of the packaged material at the point of manufacture.

10. Stability and reactivity

Stability
Stable

Conditions to avoid
Stable under recommended storage conditions.

Materials to avoid
None reasonably foreseeable.

Hazardous decomposition products
When exposed to high temperatures may produce hazardous decomposition products such as carbon monoxide and dioxide, smoke, oxides of nitrogen.

Hazardous Polymerization
Will not occur.

Sensitivity to Static Discharge
Solvent vapors in air may explode if static grounding and bonding is not used during transfer of this product.

Sensitivity to Mechanical Impact
None known.

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11. Toxicological information

Information on likely routes of exposure

Inhalation
May cause nose and throat irritation. May cause nervous system depression characterized by the following progressive steps: headache, dizziness, nausea, staggering gait, confusion, unconsciousness. Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage.

Ingestion
May result in gastrointestinal distress.

Skin or eye contact
May cause irritation or burning of the eyes. Repeated or prolonged liquid contact may cause skin irritation with discomfort and dermatitis.

Delayed and immediate effects and also chronic effects from short and long term exposure:

Acute oral toxicity

methanol	Category 3
xylene	Category 5
ethylbenzene	Category 5

Acute dermal toxicity

methanol	Category 3
xylene	Category 4

Acute inhalation toxicity
Not classified according to GHS criteria

% of unknown composition 0 %

Skin corrosion/irritation

toluene	Category 2
acetone	Category 3
low boiling point naphtha (<0,1% benzene)	Category 2
xylene	Category 2
ethylbenzene	Category 3

Serious eye damage/eye irritation

toluene	Category 2B
acetone	Category 2A
methanol	Category 2A
low boiling point naphtha (<0,1% benzene)	Category 2A
xylene	Category 2A
ethylbenzene	Category 2B

Respiratory sensitisation
Not classified according to GHS criteria

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Skin sensitisation
Not classified according to GHS criteria

Germ cell mutagenicity
Not classified according to GHS criteria

Carcinogenicity
Not classified according to GHS criteria

Toxicity for reproduction

toluene Category 2

Target Organ Systemic Toxicant - Single exposure

- **Skin Absorption**

  Narcotic effects toluene

  Eyes methanol

  Kidney methanol

  Liver methanol

- **Inhalation**

  Central nervous system low boiling point naphtha (<0,1% benzene), methanol

Target Organ Systemic Toxicant - Repeated exposure

- **Skin Absorption**

  Eyes methanol

  Central nervous system methanol

Aspiration toxicity
Not classified according to GHS criteria

Numerical measures of toxicity (acute toxicity estimation (ATE),etc.)
No information available.

Symptoms related to the physical, chemical and toxicological characteristics
Exposure to component solvents vapours concentration in excess of the stated occupational exposure limit may result in adverse health effect such as mucous membrane and respiratory system irritation and adverse effect on kidney, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness. Through skin resorbtion, solvents can cause some of the effects described here. Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin resulting in non-allergic contact dermatitis and absorption through the skin. The liquid splashed in the eyes may cause irritation and reversible damage.

Whether the hazardous chemical is listed by NTP, IARC or OSHA

ethylbenzene IARC 2B

12. Ecological information

There are no data available on the product itself. The product should not be allowed to enter drains or watercourses.

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13. Disposal considerations

Waste Disposal Method
Do not allow material to contaminate ground water systems. Incinerate or otherwise dispose of waste material in accordance with Federal, State, Provincial, and local requirements. Do not incinerate in closed containers.

14. Transport information

International transport regulations

IMDG (Sea transport)	
UN number:	1992
Proper shipping name:	FLAMMABLE LIQUID, TOXIC, N.O.S. (acetone; phenol)
Hazard Class:	3
Subsidiary Hazard Class:	6.1
Packing group:	II
Marine Pollutant:	no
ICAO/IATA (Air transport)	
UN number:	1992
Proper shipping name:	FLAMMABLE LIQUID, TOXIC, N.O.S. (acetone; phenol)
Hazard Class:	3
Subsidiary Hazard Class:	6.1
Packing group:	II
DOT	
UN number:	1992
Proper shipping name:	FLAMMABLE LIQUID, TOXIC, N.O.S. (acetone; phenol)
Hazard Class:	3
Subsidiary Hazard Class:	6.1
Packing group:	II
Marine Pollutant:	no
EmS:	F-E,S-D

Matters needing attention for transportation
Confirm that there is no breakage, corrosion, or leakage from the container before shipping. Be sure to prevent damage to cargo by loading so as to avoid falling, dropping, or collapse. Ship in appropriate containers with denotation of the content in accordance with the relevant statutes and rules.

15. Regulatory information

TSCA Status
In compliance with TSCA Inventory requirements for commercial purposes.

DSL Status
All components of the mixture are listed on the DSL.

Photochemical Reactivity
Photochemically reactive

US. California Safe Drinking Water & Toxic Enforcement Act (Proposition 65)
Warning! This product contains a chemical known to the state of California to cause cancer, birth defects, or other reproductive harm.

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Regulatory information

		EPCRA					CERCLA	CAA
CAS #	Ingredient	302	TPQ	RQ	311 - 312	313	RQ(lbs)	HAP
108-88-3	Toluene	N	NR	NR	A,C,F	Y	1,000	Y
67-64-1	Acetone	N	NR	NR	A,C,F	N	5,000	N
67-56-1	Methyl alcohol	N	NR	NR	A,C,F	Y	5,000	Y
8032-32-4	Vm&p naphtha	N	NR	NR	A,C,F	N	NR	N
1330-20-7	Xylene	N	NR	NR	A,C,F	Y	100	Y
100-41-4	Ethylbenzene	N	NR	NR	A,C,F	Y	1,000	Y

Key:

EPCRA	Emergency Planning and Community Right-to-know Act (aka Title III, SARA)
302	Extremely hazardous substances
311/312 Categories	F = Fire Hazard R = Reactivity Hazard P = Pressure Related Hazard A = Acute Hazard C = Chronic Hazard
313 Information	Section 313 Supplier Notification - The chemicals listed above with a 'Y' in the 313 column are subject to reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know act of 1986 and of 40 CFR 372.
CERCLA	Comprehensive Emergency Response, Compensation and Liability Act of 1980.
HAP	Listed as a Clean Air Act Hazardous Air Pollutant.
TPQ	Threshold Planning Quantity.
RQ	Reportable Quantity
NA	not available
NR	not regulated

16. Other information

HMIS rating H: 2 F: 3 R: 0

Glossary of Terms:

ACGIH	American Conference of Governmental Industrial Hygienists.
IARC	International Agency for Research on Cancer.
NTP	National Toxicology Program.
OEL	Occupational Exposure Limit
OSHA	Occupational Safety and Health Administration.
STEL	Short term exposure limit.
TWA	Time-weighted average.
PNOR	Particles not otherwise regulated.
PNOC	Particles not otherwise classified.

NOTE: The list (above) of glossary terms may be modified.

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SDS prepared by:
Axalta Coating Systems Regulatory Affairs
Report version

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Version	Changes

Version	Changes
1.1	8, 12, 14, 15, 16

Revision Date: 2014-11-18

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1. Identification of the substance/mixture and of the company/undertaking

Product name	Low HAPS Cleaning Solvent	
Product code	108™	140814
Intended use	Solvent for professional use	
	Axalta Coating Systems, LLC Applied Corporate Center 50 Applied Card Way, Suite 300 US Glen Mills, PA 19342	
Telephone	Product information Medical emergency Transportation emergency	(855) 6-AXALTA (855) 274-5698 (800) 424-9300 (CHEMTREC)

2. Hazards identification

This preparation is hazardous per the following GHS criteria

GHS-Classification

Flammable liquids	Category 2
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2A
Toxicity for reproduction	Category 2
Target Organ Systemic Toxicant - Single exposure	Category 3
Target Organ Systemic Toxicant - Repeated exposure	Category 2

Endpoints which are ""not classified"", ""cannot classified"" and ""not applicable"" are not shown

GHS-Labelling

Hazard symbols

Signal word: Danger

Hazard statements:
Highly flammable liquid and vapour.
Causes skin irritation.
Causes serious eye irritation.
Suspected of damaging fertility or the unborn child.
May cause drowsiness or dizziness.
May cause damage to organs through prolonged or repeated exposure.

Precautionary statements:
Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
Ground/bond container and receiving equipment.
Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
Obtain special instructions before use.
Take precautionary measures against static discharge.
Use explosion-proof electrical/ventilating/lighting equipment.
Use only non-sparking tools.
Use only outdoors or in a well-ventilated area.
Wear protective gloves/protective clothing/eye protection/face protection.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
If eye irritation persists: Get medical advice/ attention.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

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IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.
IF ON SKIN: Wash with plenty of soap and water.
If skin irritation occurs: Get medical advice/ attention.
Specific treatment (see supplemental first aid instructions on this label).
Take off contaminated clothing and wash before reuse.
Store in a well-ventilated place. Keep container tightly closed.
Store locked up.
Dispose of contents/container to .?.

Other hazards which do not result in classification
None known.

The following percentage of the mixture consists of ingredient(s) with unknown acute toxicity:
0 %

3. Composition/information on ingredients

mixture of solvents

Components

CAS-No.	Chemical Name	Concentration
67-64-1	Acetone	
142-82-5	Heptane	
67-63-0	Isopropyl alcohol	
108-88-3	Toluene	10%
123-86-4	Butyl acetate	
64742-95-6	Aromatic hydrocarbon	
108-65-6	Propylene glycol monomethyl ether acetate	

Non-regulated ingredients 1 - 5%
OSHA Hazardous: Yes

4. First aid measures

Eye contact
Remove contact lenses. Irrigate copiously with clean, fresh water for at least 15 minutes, holding the eyelids apart. Seek medical advice.

Skin contact
Do NOT use solvents or thinners. Take off all contaminated clothing immediately. Wash skin thoroughly with soap and water or use recognized skin cleanser. If skin irritation persists, call a physician.

Inhalation
Avoid inhalation of vapour or mist. Move to fresh air in case of accidental inhalation of vapours. If breathing is irregular or stopped, administer artificial respiration. If unconscious place in recovery position and seek medical advice. If symptoms persist, call a physician.

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Ingestion
If swallowed, seek medical advice immediately and show this container or label. Do NOT induce vomiting. Keep at rest.

Most Important Symptoms/effects, acute and delayed

Inhalation
May cause nose and throat irritation. May cause nervous system depression characterized by the following progressive steps: headache, dizziness, nausea, staggering gait, confusion, unconsciousness. Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage.

Ingestion
May result in gastrointestinal distress.

Skin or eye contact
May cause irritation or burning of the eyes. Repeated or prolonged liquid contact may cause skin irritation with discomfort and dermatitis.

Indication of immediate medical attention and special treatment needed if necessary
No data available on the product. See section 3 and 11 for hazardous ingredients found in the product.

5. Firefighting measures

Suitable extinguishing media
Universal aqueous film-forming foam, Carbon dioxide (CO2), Dry chemical

Extinguishing media which shall not be used for safety reasons
High volume water jet

Hazardous combustion products
CO, CO2, smoke, and oxides of any heavy metals that are reported in "Composition, Information on Ingredients" section.

Fire and Explosion Hazards
Flammable liquid. Vapor/air mixture will burn when an ignition source is present.

Special Protective Equipment and Fire Fighting Procedures
Full protective flameproof clothing should be worn as appropriate. Wear self contained breathing apparatus for fire fighting if necessary. In the event of fire, cool tanks with water spray. Do not allow run-off from fire fighting to enter public sewer systems or public waterways.

6. Accidental release measures

Procedures for cleaning up spills or leaks
Ventilate area. Remove sources of ignition. Prevent skin and eye contact and breathing of vapor. Wear a properly fitted air-purifying respirator with organic vapor cartridges (NIOSH approved TC-23C), eye protection, gloves and protective clothing. Confine, remove with inert absorbent, and dispose of properly.

Environmental precautions
Do not let product enter drains. Notify the respective authorities in accordance with local law in the case of contamination of rivers, lakes or waste water systems.

7. Handling and storage

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Precautions for safe handling
Observe label precautions. Keep away from heat, sparks, flame, static discharge and other sources of ignition. VAPORS MAY IGNITE EXPLOSIVELY. Vapors may spread long distances. Prevent buildup of vapors. Extinguish all pilot lights and turn off heaters, non-explosion proof electrical equipment and other sources of ignition during and after use and until all vapors are gone. Close container after each use. Ground containers when pouring. Wash thoroughly after handling and before eating or smoking. Do not store above 120 deg F.
If material is a coating: do not sand, flame cut, braze or weld dry coating without a NIOSH approved air purifying respirator with particulate filters or appropriate ventilation, and gloves. Combustible dust clouds may be created where operations produce fine material (dust). Avoid formation of significant deposits of material as they may become airborne and form combustible dust clouds. Build up of fine material should be cleaned using gentle sweeping or vacuuming in accordance with best practices. Cleaning methods (e.g. compressed air) which can generate potentially combustible dust clouds should not be used.

Advice on protection against fire and explosion
Solvent vapours are heavier than air and may spread along floors. Vapors may form explosive mixtures with air and will burn when an ignition source is present. Always keep in containers of same material as the original one. Never use pressure to empty container: container is not a pressure vessel. The accumulation of contaminated rags may result in spontaneous combustion. Good housekeeping standards and regular safe removal of waste materials will minimize the risks of spontaneous combustion and other fire hazards.

Storage
Requirements for storage areas and containers
Observe label precautions. Store in a dry, well ventilated place away from sources of heat, ignition and direct sunlight. No smoking. Prevent unauthorized access. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Advice on common storage
Store separately from oxidizing agents and strongly alkaline and strongly acidic materials.

OSHA/NFPA Storage Classification: IB

8. Exposure controls/personal protection

Engineering controls and work practices
Provide adequate ventilation. This should be achieved by a good general extraction and -if practically feasible- by the use of a local exhaust ventilation. If these are not sufficient to maintain concentrations of particulates and solvent vapour below the OEL, suitable respiratory protection must be worn.

National occupational exposure limits

CAS-No.	Chemical Name	Source	Time	Type	Value	Note
67-64-1	Acetone	ACGIH	15 min	STEL	750 ppm	
			8 hr	TWA	500 ppm	
		OSHA	8 hr	TWA	1,000 ppm	
		Dupont	8 & 12 hour	TWA	500 ppm	
142-82-5	Heptane	ACGIH	15 min	STEL	500 ppm	
			8 hr	TWA	400 ppm	
		OSHA	8 hr	TWA	500 ppm	
108-88-3	Toluene	ACGIH	8 hr	TWA	20 ppm	
		OSHA		CEIL	300 ppm	
			10 min	TWA	500 ppm	

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CAS-No.	Chemical Name	Source	Time	Type	Value	Note
			8 hr	TWA	200 ppm	
		Dupont	8 & 12 hour	TWA	50 ppm	Skin
123-86-4	Butyl acetate	ACGIH	15 min	STEL	200 ppm	
			8 hr	TWA	150 ppm	
		OSHA	8 hr	TWA	150 ppm	
64742-95-6	Aromatic hydrocarbon	Dupont	8 & 12 hour	TWA	50 ppm	
108-65-6	Propylene glycol monomethyl ether acetate	Dupont	15 min	TWA	30 ppm	

** STEL = Short term exposure limit.
TWA = Time-weighted average.
CEIL = Ceiling.

Protective equipment
Personal protective equipment should be worn to prevent contact with eyes, skin or clothing.

Respiratory protection
Do not breathe vapors or mists. Wear a properly fitted air-purifying respirator with organic vapor cartridges (NIOSH approved TC-23C) and particulate filter (NIOSH TC-84A) during application and until all vapors and spray mists are exhausted. In confined spaces, or in situations where continuous spray operations are typical, or if proper air-purifying respirator fit is not possible, wear a positive pressure, supplied-air respirator (NIOSH TC-19C). In all cases, follow respirator manufacturer's directions for respirator use. Do not permit anyone without protection in the painting area.

Eye protection
Desirable in all industrial situations. Goggles are preferred to prevent eye irritation. If safety glasses are substituted, include splash guard or side shields.

Skin and body protection
Neoprene gloves and coveralls are recommended.

Hygiene measures
Wash skin thoroughly with soap and water or use recognized skin cleanser. Do NOT use solvents or thinners.

Environmental exposure controls
Do not let product enter drains. For ecological information, refer to Ecological Information Section 12.

9. Physical and chemical properties

Appearance

Form: liquid Colour: clear

Flash point	0 °F
Ignition temperature	215 °C
Lower Explosive Limit	1 %
Upper Explosive Limit	12.8 %

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Evapouration rate	Slower than Ether	
Vapor pressure of principal solvent	122.7 hPa	
Water solubility	appreciable	
Vapor density of principal solvent (Air = 1)	2	
Approx. Boiling Range	83 °C	
Approx. Freezing Range	Not applicable.	
Gallon Weight (lbs/gal)	6.56	
Specific Gravity	0.79	
Percent Volatile By Volume	100.00%	
Percent Volatile By Weight	100.00%	
Percent Solids By Volume	0.00%	
Percent Solids By Weight	0.00%	
pH (waterborne systems only)	No data available.	
Partition coefficient: n-octanol/water	no data available	
Ignition temperature	215 °C	DIN 51794
Decomposition temperature		
Viscosity (23 °C)	Not applicable.	ISO 2431-1993
VOC* less exempt (lbs/gal)	6.5	
VOC* as packaged (lbs/gal)	3.9	

* VOC less exempt (theoretical) and VOC as packaged (theoretical) are based upon the VOC of the packaged material at the point of manufacture.

10. Stability and reactivity

Stability
Stable

Conditions to avoid
Stable under recommended storage conditions.

Materials to avoid
None reasonably foreseeable.

Hazardous decomposition products
When exposed to high temperatures may produce hazardous decomposition products such as carbon monoxide and dioxide, smoke, oxides of nitrogen.

Hazardous Polymerization
Will not occur.

Sensitivity to Static Discharge
Solvent vapors in air may explode if static grounding and bonding is not used during transfer of this product.

Sensitivity to Mechanical Impact
None known.

11. Toxicological information

Information on likely routes of exposure

Inhalation
May cause nose and throat irritation. May cause nervous system depression characterized by the following progressive steps: headache, dizziness, nausea, staggering gait, confusion, unconsciousness. Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage.

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Ingestion
May result in gastrointestinal distress.

Skin or eye contact
May cause irritation or burning of the eyes. Repeated or prolonged liquid contact may cause skin irritation with discomfort and dermatitis.

Delayed and immediate effects and also chronic effects from short and long term exposure:

Acute oral toxicity
not hazardous

Acute dermal toxicity
not hazardous

Acute inhalation toxicity
not hazardous

% of unknown composition 0 %

Skin corrosion/irritation

acetone	Category 3
heptane (mixture of isomers)	Category 2
propan-2-ol	Category 3
toluene	Category 2
n-butyl acetate	Category 3
solvent naphtha (petroleum), light arom. (<0,1% benzene)	Category 3

Serious eye damage/eye irritation

acetone	Category 2A
heptane (mixture of isomers)	Category 2A
propan-2-ol	Category 2A
toluene	Category 2B
2-methoxy-1-methylethyl acetate	Category 2A

Respiratory sensitisation
Not classified according to GHS criteria

Skin sensitisation
Not classified according to GHS criteria

Germ cell mutagenicity
Not classified according to GHS criteria

Carcinogenicity
Not classified according to GHS criteria

Toxicity for reproduction

toluene Category 2

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Target Organ Systemic Toxicant - Single exposure

- **Skin Absorption**

  Narcotic effects toluene

- **Inhalation**

  Respiratory system propan-2-ol, 2-methoxy-1-methylethyl acetate

  reproductive organs heptane (mixture of isomers)

Target Organ Systemic Toxicant - Repeated exposure
No data available.

Aspiration toxicity
Not classified according to GHS criteria

Numerical measures of toxicity (acute toxicity estimation (ATE),etc.)
No information available.

Symptoms related to the physical, chemical and toxicological characteristics
Exposure to component solvents vapours concentration in excess of the stated occupational exposure limit may result in adverse health effect such as mucous membrane and respiratory system irritation and adverse effect on kidney, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness. Through skin resorbtion, solvents can cause some of the effects described here. Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin resulting in non-allergic contact dermatitis and absorption through the skin. The liquid splashed in the eyes may cause irritation and reversible damage.

Whether the hazardous chemical is listed by NTP, IARC or OSHA

12. Ecological information

There are no data available on the product itself. The product should not be allowed to enter drains or watercourses.

13. Disposal considerations

Waste Disposal Method
Do not allow material to contaminate ground water systems. Incinerate or otherwise dispose of waste material in accordance with Federal, State, Provincial, and local requirements. Do not incinerate in closed containers.

14. Transport information

International transport regulations

IMDG (Sea transport)

UN number:	1263
Proper shipping name:	PAINT RELATED MATERIAL
Hazard Class:	3
Subsidiary Hazard Class:	Not applicable.
Packing group:	II
Marine Pollutant:	yes [heptane (mixture of isomers)]

ICAO/IATA (Air transport)

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UN number:	1263
Proper shipping name:	PAINT RELATED MATERIAL
Hazard Class:	3
Subsidiary Hazard Class:	Not applicable.
Packing group:	II

DOT

UN number:	1263
Proper shipping name:	PAINT RELATED MATERIAL
Hazard Class:	3
Subsidiary Hazard Class:	Not applicable.
Packing group:	II
Marine Pollutant:	yes [heptane (mixture of isomers)]
EmS:	F-E,S-E

Matters needing attention for transportation
Confirm that there is no breakage, corrosion, or leakage from the container before shipping. Be sure to prevent damage to cargo by loading so as to avoid falling, dropping, or collapse. Ship in appropriate containers with denotation of the content in accordance with the relevant statutes and rules.

15. Regulatory Information

TSCA Status
In compliance with TSCA Inventory requirements for commercial purposes.

DSL Status
All components of the mixture are listed on the DSL.

Photochemical Reactivity
Non-photochemically reactive

US. California Safe Drinking Water & Toxic Enforcement Act (Proposition 65)
WARNING! This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

Regulatory Information

		EPCRA					CERCLA	CAA
CAS #	Ingredient	302	TPQ	RQ	311 - 312	313	RQ(lbs)	HAP
67-64-1	Acetone	N	NR	NR	A,C,F	N	5,000	N
142-82-5	Heptane	N	NR	NR	A,C,F	N	NR	N
67-63-0	Isopropyl alcohol	N	NR	NR	A,C,F	N	NR	N
108-88-3	Toluene	N	NR	NR	A,C,F	Y	1,000	Y
123-86-4	Butyl acetate	N	NR	NR	A,C,F	N	NR	N
64742-95-6	Aromatic hydrocarbon	N	NR	NR	A,C,F	N	NR	N
108-65-6	Propylene glycol monomethyl ether acetate	N	NR	NR	F	N	NR	N

Key:

EPCRA	Emergency Planning and Community Right-to-know Act (aka Title III, SARA)	
302	Extremely hazardous substances	
311/312 Categories	F = Fire Hazard	A = Acute Hazard
	R = Reactivity Hazard	C = Chronic Hazard

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	P = Pressure Related Hazard
313 Information	Section 313 Supplier Notification - The chemicals listed above with a 'Y' in the 313 column are subject to reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know act of 1986 and of 40 CFR 372.
CERCLA	Comprehensive Emergency Response, Compensation and Liability Act of 1980.
HAP	Listed as a Clean Air Act Hazardous Air Pollutant.
TPQ	Threshold Planning Quantity.
RQ	Reportable Quantity
NA	not available
NR	not regulated

16. Other information

HMIS rating H: 2 F: 3 R: 0

Glossary of Terms:

ACGIH	American Conference of Governmental Industrial Hygienists.
IARC	International Agency for Research on Cancer.
NTP	National Toxicology Program.
OEL	Occupational Exposure Limit
OSHA	Occupational Safety and Health Administration.
STEL	Short term exposure limit.
TWA	Time-weighted average.
PNOR	Particles not otherwise regulated.
PNOC	Particles not otherwise classified.

NOTE: The list (above) of glossary terms may be modified.

Notice from Axalta Coating Systems
The document reflects information provided to Axalta Coating Systems by its suppliers. Information is accurate to the best of our knowledge and is subject to change as new data is received by Axalta Coating Systems. Persons receiving this information should make their own determination as to its suitability for their purposes prior to use. The information on this Material Safety Data Sheet relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process.
SDS prepared by:
Axalta Coating Systems Regulatory Affairs
Report version

Version	Changes
3.0	2, 3, 4, 5, 6, 7, 8, 9, 11, 14, 15

Revision Date: 2014-11-18

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RUST-OLEUM®

V2100 SYSTEM ENAMEL AEROSOL

DESCRIPTION AND USES

Rust-Oleum® V2100 System Enamel aerosols are available in high-gloss, semi-gloss, flat, metallic and fluorescent finishes. They apply easily and dry fast to a tough, attractive corrosion-resistant finish featuring superior coverage, color, and gloss retention and resist chipping, cracking and peeling. They are available in a variety of colors including safety and fluorescent colors, and many match popular Rust-Oleum Industrial Enamel gallon colors for easy touch-ups. Not for use on galvanized steel.

Primer aerosols are used for maximum corrosion protection on clean, rusted or previously painted metal. Not for use on galvanized steel. They are fast dry, quick recoat rust inhibiting primers designed for use with the V2100 System Enamel aerosols to optimize corrosion control.

Galvanizing aerosols are zinc-rich coatings that provide maximum corrosion resistance through galvanic protection. Use for touch-up and repair to damaged galvanized steel; production welds, galvanized ducts, storage tanks, fences, gutters, trucks, trailers, off-shore drilling rigs, utility towers, and more. V2185838 meets performance requirements of ASTM A-780-01 (par. 4.1.2, 4.1.3, 4.2.2). Do not topcoat with an alkyd finish.

High Performance V2100 System Enamel complies with USDA FSIS regulatory sanitation performance standards for food establishment facilities.

PRODUCTS

PRIMERS

209566	White Clean Metal Primer
V2169838	Red Primer
V2182838	Gray Primer

HIGH HEAT COATING

V2116838	High Temperature Aluminum
V2176838	High Temperature Black

GALVANIZING

V2117838	Bright Galvanizing Compound
V2185838	Cold Galvanizing Compound

FARM EQUIPMENT

209713	John Deere Green
209714	John Deere Yellow
209715	Caterpillar Yellow (Old)
209716	Allis Chalmers Orange
209717	International Harvester Red
209718	Ford Blue

FLUORESCENTS

2233838	Fluorescent Green
2255838	Fluorescent Orange
209568	Fluorescent Pink
2264838	Fluorescent Red
2242838	Fluorescent Yellow

PRODUCTS (cont.)

SAFETY

V2124838	Safety Blue
V2133838	Safety Green
V2155838	Safety Orange
V2167838	Safety Purple
V2163838	Safety Red
V2143838	Safety Yellow

ENAMELS

V2102838	Crystal Clear
V2170838	Almond
V2115838	Silver Aluminum
V2171838	Tan
V2119838	Stainless Steel
V2175838	Chestnut Brown
V2123838	Light Blue
V2177838	Semi-Gloss Black
V2178838	Flat Black
V2125838	Deep Blue
V2179838	Gloss Black
V2183838	Light Machine Gray
V2134838	Bright Green
V2184838	Dove Gray
V2137838	Dark Green
V2187838	Dark Machine Gray
V2138838	Hunter Green
V2188838	Smoke Gray
V2190838	Flat White
V2147838	Industrial Yellow
V2192838	Gloss White
V2148838	Equipment Yellow
V2196838	Fleet White
V2156838	Equipment Orange
V2164838	Bright Red
209565	Anodized Bronze
209567	Semi-Gloss White

MINI SPRAYS – 3oz

276011	Gloss Black
276013	Gloss White
276015	Safety Yellow
276018	Spot Primer†

† V2100 System Rust Reformer® formula – For use on rusted steel only.

PRODUCT APPLICATION

SURFACE PREPARATION

ALL SURFACES: Remove all dirt, grease, oil, salt and chemical contaminants by washing the surface with Pure Strength® Cleaner/ Degreaser item #3599402, commercial detergent or other suitable cleaner. Rinse immediately and thoroughly and allow to fully dry. Thoroughly cured, hard or gloss previous coatings which are very smooth may require scuff sanding to maximize adhesion.

PRODUCT APPLICATION (cont.)

SURFACE PREPARATION (cont.)

STEEL: Hand tool (SSPC-SP-2) or power tool (SSPC-SP-3) clean to remove loose rust, mill scale, and deteriorated previous coatings. For best results, use Red Primer on sound rusted or clean metal before the application of a finish coat or intermediate primer.

PREVIOUSLY COATED: Previously coated surfaces must be sound and in good condition. Smooth, hard, or glossy finishes should be scarified by sanding to create a surface profile.

GALVANIZED STEEL: New galvanized steel may contain a surface wax or oil from the fabricator. This must be removed with Pure Strength® Cleaner/Degreaser (#3599402), commercial detergent or other suitable cleaner. NOTE: Only the Galvanizing Compounds are to be used on galvanized steel. Do not use any other of the 1600 System Primers or Finish Colors.

WEATHERED GALVANIZED STEEL: Remove loose rust and stains by hand tool (SSPC-SP-2) or power tool (SSPC-SP-3) prior to application of the Cold Galvanizing Compound.

PRODUCT APPLICATION (cont.)

APPLICATION

Use when temperature is above 50°F (10°C) and humidity is below 85% to ensure proper drying. Surface temperature must be between 50-100°F (10-38°C).

Use primer on bare or rusted surfaces. Do not use any primer with V2116838 High Temperature Aluminum, V2176838 High Temperature Black, V2117838 Bright Galvanizing Compound or V2185838 Cold Galvanizing Compound.

Protect surrounding surfaces from overspray. Overspray can carry a significant distance. Shake can for one minute after mixing ball is heard. Hold can 10-14 inches from surface. Apply several light coats a few minutes apart to avoid drips and runs.

DRY & RECOAT TIMES

Recoat within 1 hour or after 24 hours. allow more time in cooler temperatures.

CLEAN-UP

Wipe off tip before storing. Clean-up wet paint with xylene or mineral spirits. Properly discard empty container. Do not burn or place in trash compactor. Empty container can be recycled.

CLOGGING

If the valve clogs, twist and pull off spray tip and rinse in a solvent such as mineral spirits. Do not insert any object into can valve opening.

RUST-OLEUM®

TECHNICAL DATA

V2100 SYSTEM ENAMEL AEROSOL

PHYSICAL PROPERTIES

		ENAMELS	PRIMERS	GALVANIZING	HIGH HEAT
Resin Type		V2102838, V2115838, and V2119838: Acrylic; All others: Modified alkyd	Modified Alkyd and Acrylic	Epoxy Ester	V2116838: silicone blend V2176838: silicone modified alkyd
Pigment Type		Varies	Zinc phosphate, zinc molybdate, talc, calcium carbonate, red iron oxide (V2169838), titanium dioxide, carbon black (V2182838)	V2117838 contains 80% zinc and 12% aluminum (in the dry film) V2185838 contains 93% zinc (in the dry film)	V2116838: aluminum flake V2176838: black manganese ferrite
Solvents		Acetone, xylene, toluene (fluorescents also contain hexane), and liquefied petroleum gas propellant			
MIR		Finishes: Max value of 1.4 Metallics: Max value of 1.9	Maximum value of 1.2	Maximum value of 1.2	Max value of 1.85
Fill Weight		V2102, V2115, V2119 and all fluorescents: 14 oz. (398 g.); All others: 15 oz. (426 g) Mini Spray 3 oz.	15 oz. (426 grams) Mini Spray 3 oz.	20 oz. (568 grams)	15 oz. (426 grams)
Recommended Dry Film Thickness (DFT) Per Coat		1.0-2.0 mils (25-50µ)	1.0-2.0 mils (25-50µ)	1.0-2.0 mils (25-50µ)	1.0-2.0 mils (25-50µ)
Practical Coverage at Recommended DFT (Square Feet / Aerosol) (Depends on color)		V2100 finishes: Approx. 12-20 sq.ft. (1.1-1.9 m^2) Fluorescent finishes: Approx. 10 sq.ft. (0.9 m^2) Mini Spray: Approximately 3 sq.ft. (0.7 m^2)	Approximately 12-20 sq.ft. (1.1-1.9 m^2) Mini Spray: Approx. 3 sq.ft. (0.7 m^2)	Approximately 12-20 sq.ft. (1.1.1.9 m^2)	Approximately 12-20 sq.ft. (1.1-1.9 m^2)
Dry Times at 70-80°F (21-27°C) and 50% Relative Humidity	**Tack-free**	10-20 minutes	10-20 minutes	10-20 minutes	V2116838: 10-20 minutes V2176838: 2-4 hours
	Handle	1-2 hours	1-2 hours	1-2 hours	V2116838: 1-2 hours V2176838: 4-7 hours
	Recoat	Within 1 hour or after 24 hours*	At any time	Within 1 hour or after 24 hours**	V2116838: Anytime V2176838: Within 1 hour or after 24 hours
Dry Heat Resistance		200°F (93°C)	200°F (93°C)	200°F (93°C)	1000°F (538°C)
Shelf Life		5 years	5 years	5 years	5 years
Safety Information		For additional information, see MSDS			

Calculated values are shown and may vary slightly from the actual manufactured material.
*Allow more time in cooler temperatures
**Do not topcoat galvanizing compounds with an alkyd finish.

The technical data and suggestions for use contained herein are correct to the best of our knowledge, and offered in good faith. The statements of this literature do not constitute a warranty, express, or implied, as to the performance of these products. As conditions and use of our materials are beyond our control, we can guarantee these products only to conform to our standards of quality, and our liability, if any, will be limited to replacement of defective materials. All technical information is subject to change without notice.

RUST-OLEUM INDUSTRIAL BRANDS
Rust-Oleum Corporation
11 Hawthorn Parkway
Vernon Hills, Illinois 60061
An RPM Company
Phone: 877-385-8155
www.rustoleum.com/industrial

Form: GDH-682
Rev.: 021115

Material Safety Data Sheet

24 Hour Assistance:
1-847-367-7700
Rust-Oleum Corp.
www.rustoleum.com

Section 1 - Chemical Product / Company Information

Product Name: Rust-Oleum High Performance Industrial Enamel Aerosol Topcoats (Hard Hat)

Revision Date: 12/23/2008

Identification Number: 209567, V2124838, V2125838, V2133838, V2134838, V2137838, V2138838, V2143838, V2147838, V2148838, V2155838, V2156838, V2163838, V2164838, V2167838, V2170838, V2171838, V2174838, V2175838, V2177838, V2179838, V2183838, V2184838, V2187838, V2188838, V2190838, V2192838, V2196838

Product Use/Class: Topcoats/Aerosol

Supplier: Rust-Oleum Corporation
11 Hawthorn Parkway
Vernon Hills, IL 60061
USA

Manufacturer: Rust-Oleum Corporation
11 Hawthorn Parkway
Vernon Hills, IL 60061
USA

Preparer: Regulatory Department

Section 2 - Composition / Information On Ingredients

Chemical Name	CAS Number	Weight % Less Than	ACGIH TLV-TWA	ACGIH TLV-STEL	OSHA PEL-TWA	OSHA PEL-CEILING
Acetone	67-64-1	35.0	500 ppm	750 ppm	750 ppm	N.E.
Liquefied Petroleum Gas	68476-86-8	30.0	1000 ppm	N.E.	1000 ppm	N.E.
Titanium Dioxide	13463-67-7	15.0	10 mg/m3	N.E.	10 mg/m3	N.E.
n-Butyl Acetate	123-86-4	15.0	150 ppm	200 ppm	150 ppm	N.E.
Xylene	1330-20-7	10.0	100 ppm	150 ppm	100 ppm	N.E.
Methyl Ethyl Ketone	78-93-3	10.0	200 PPM	300 PPM	200 PPM	N.E.
Magnesium Silicate	14807-96-6	10.0	10 mg/m3	N.E.	15 mg/m3	N.E.
Ethylene Glycol Monobutyl Ether	111-76-2	5.0	20 PPM	N.E.	50 PPM	N.E.
Mineral Spirits	64742-88-7	5.0	100 ppm	N.E.	100 ppm	N.E.
Propylene Glycol Monobutyl Ether	5131-66-8	5.0	N.E	N.E.	N.E.	N.E.
Toluene	108-88-3	5.0	50 ppm	150 ppm	200 ppm	300 ppm
Ethylbenzene	100-41-4	5.0	100 ppm	125 ppm	100 ppm	N.E.
Aromatic Solvent	64742-95-6	5.0	N.E.	N.E.	N.E.	N.E.
Aromatic Petroleum Distillates	64742-94-5	5.0	10 ppm	N.E.	10 ppm	N.E.
1,2,4-Trimethylbenzene	95-63-6	5.0	25 ppm	N.E.	N.E.	N.E.
Calcined Aluminum Silicate	1332-58-7	5.0	2 mg/m3	N.E.	5 mg/m3	N.E.
Pigment Black 7	1333-86-4	5.0	3.5 mg/m3	N.E.	3.5 mg/m3	N.E.
Pigment Yellow 17	4531-49-1	5.0	2 mg/m3	N.E.	5 mg/m3	N.E.
Pigment Violet 32	12225-08-0	1.0	N.E	N.E.	N.E.	N.E.
Quartz (Crystalline Silica)	14808-60-7	1.0	0.025 mg/m3	N.E.	0.10 mg/m3	N.E.

Section 3 - Hazards Identification

*** Emergency Overview ***: Contains Aromatic Distillate, which may cause cancer. Contents Under Pressure. Harmful if inhaled. May affect the brain or nervous system causing dizziness, headache or nausea. Harmful if swallowed. Extremely flammable liquid and vapor. Vapors may cause flash fire or explosion.

Effects Of Overexposure - Eye Contact: Causes eye irritation.

Effects Of Overexposure - Skin Contact: May be harmful if absorbed through skin. Prolonged or repeated contact may cause skin irritation. Substance may cause slight skin irritation.

Effects Of Overexposure - Inhalation: High vapor concentrations are irritating to the eyes, nose, throat and lungs. Harmful if inhaled. High gas, vapor, mist or dust concentrations may be harmful if inhaled. Avoid breathing vapors or mists.

Effects Of Overexposure - Ingestion: Aspiration hazard if swallowed; can enter lungs and cause damage. Substance may be harmful if swallowed.

Effects Of Overexposure - Chronic Hazards: IARC lists Ethylbenzene as a possible human carcinogen (group 2B). Contains Titanium Dioxide. Titanium Dioxide is listed as a Group 2B-"Possibly carcinogenic to humans" by IARC. Significant exposure is not anticipated during brush application or drying. Risk of overexposure depends on duration and level of exposure to dust from repeated sanding of surfaces or spray mist and the actual concentration of Titanium Dioxide in the formula.

May cause central nervous system disorder (e.g., narcosis involving a loss of coordination, weakness, fatigue, mental confusion, and blurred vision) and/or damage. Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Overexposure to xylene in laboratory animals has been associated with liver abnormalities, kidney, lung, spleen, eye and blood damage as well as reproductive disorders. Effects in humans, due to chronic overexposure, have included liver, cardiac abnormalities and nervous system damage. Overexposure to toluene in laboratory animals has been associated with liver abnormalities, kidney, lung and spleen damage. Effects in humans have included liver and cardiac abnormalities. Overexposure to methyl ethyl ketone in laboratory animals has been associated with liver abnormalities, kidney and lung damage. Fetotoxic/embryotoxic effects from inhalation have been seen in rats exposed to >1000ppm during gestation.

Contains carbon black. Chronic inflammation, lung fibrosis, and lung tumors have been observed in some rats experimentally exposed for long periods of time to excessive concentrations of carbon black and several insoluble fine dust particles. Tumors have not been observed in other animal species (i.e., mouse and hamster) under similar circumstances and study conditions. Epidemiological studies of North American workers show no evidence of clinically significant adverse health effects due to occupational exposure to carbon black.

Carbon black is listed as a Group 2B-"Possibly carcinogenic to humans" by IARC and is proposed to be listed as A4- "not classified as a human carcinogen" by the American Conference of Governmental Industrial Hygienists. Significant exposure is not anticipated during brush application or drying. Risk of overexposure depends on duration and level of exposure to dust from repeated sanding of surfaces or spray mist and the actual concentration of carbon black in the formula. Contains crystalline silica as silicon dioxide. Excessive inhalation of respirable crystalline silica dust may cause lung disease, silicosis or lung cancer. Significant exposure is not anticipated during brush or trowel application or drying. Risk of overexposure depends on the duration and level of exposure to dust from repeated sanding of surfaces, mechanical abrasion or spray mist and actual concentration of crystalline silica in the formula. Crystalline silica is listed as Group 1 "carcinogenic to humans" by the International Agency for Research on Cancer (IARC,) and Group 2, "reasonably anticipated to be a carcinogen" by the National Toxicology Program (NTP)

Primary Route(s) Of Entry: Skin Contact, Skin Absorption, Inhalation, Eye Contact

Section 4 - First Aid Measures

First Aid - Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes holding eyelids open. Get medical attention.

First Aid - Skin Contact: Wash with soap and water. Get medical attention if irritation develops or persists.

First Aid - Inhalation: If you experience difficulty in breathing, leave the area to obtain fresh air. If continued difficulty is experienced, get medical assistance immediately.

First Aid - Ingestion: Aspiration hazard: Do not induce vomiting or give anything by mouth because this material can enter the lungs and cause severe lung damage. Get immediate medical attention.

Section 5 - Fire Fighting Measures

Flash Point: -156 F
(Setaflash)

LOWER EXPLOSIVE LIMIT: 0.7 %
UPPER EXPLOSIVE LIMIT : 32.5 %

Extinguishing Media: Dry Chemical, Foam, Water Fog

Unusual Fire And Explosion Hazards: Water spray may be ineffective. FLASH POINT IS LESS THAN 20 °. F. - EXTREMELY FLAMMABLE LIQUID AND VAPOR! Closed containers may explode when exposed to extreme heat. Vapors may form explosive mixtures with air. Vapors can travel to a source of ignition and flash back. Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame. Perforation of the pressurized container may cause bursting of the can.

Special Firefighting Procedures: Evacuate area and fight fire from a safe distance.

Section 6 - Accidental Release Measures

Steps To Be Taken If Material Is Released Or Spilled: Contain spilled liquid with sand or earth. DO NOT use combustible materials such as sawdust. Remove all sources of ignition, ventilate area and remove with inert absorbent and non-sparking tools. Dispose of according to local, state (provincial) and federal regulations. Do not incinerate closed containers.

Section 7 - Handling And Storage

Handling: Follow all MSDS/label precautions even after container is emptied because it may retain product residues. Avoid breathing vapor or mist. Wash thoroughly after handling. Use only in a well-ventilated area. Wash hands before eating.

Storage: Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame. Do not store above 120 ° F. Store large quantities in buildings designed and protected for storage of NFPA Class I flammable liquids. Contents under pressure. Do not expose to heat or store above 120 ° F.

Section 8 - Exposure Controls / Personal Protection

Engineering Controls: Prevent build-up of vapors by opening all doors and windows to achieve cross-ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Use explosion-proof ventilation equipment.

Respiratory Protection: A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. A NIOSH/MSHA approved air purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits.

Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection.

Skin Protection: Use impervious gloves to prevent skin contact and absorption of this material through the skin. Nitrile or Neoprene gloves may afford adequate skin protection.

Eye Protection: Use safety eyewear designed to protect against splash of liquids.

Other protective equipment: Refer to safety supervisor or industrial hygienist for further information regarding personal protective equipment and its application.

Hygienic Practices: Wash thoroughly with soap and water before eating, drinking or smoking.

Section 9 - Physical And Chemical Properties

Boiling Range:	-34 - 900 F	Vapor Density:	Heavier than Air
Odor:	Solvent-like	Odor Threshold:	ND
Appearance:	Liquid	Evaporation Rate:	Faster than Ether
Solubility in H2O:	Slight		
Freeze Point:	ND	Specific Gravity:	0.866
Vapor Pressure:	ND	PH:	ND
Physical State:	Liquid		

(See section 16 for abbreviation legend)

Section 10 - Stability And Reactivity

Conditions To Avoid: Avoid temperatures above 120 ° F. Avoid all possible sources of ignition.

Incompatibility: Incompatible with strong oxidizing agents, strong acids and strong alkalies.

Hazardous Decomposition: When heated to decomposition, it emits acrid smoke and irritating fumes. By open flame, carbon monoxide and carbon dioxide.

Hazardous Polymerization: Will not occur under normal conditions.

Stability: This product is stable under normal storage conditions.

Section 11 - Toxicological Information

Product LD50: ND

Product LC50: ND

Chemical Name	LD50	LC50
Acetone	5800 mg/kg (Rat)	50100 mg/m3 (Rat, 8Hr)
Liquefied Petroleum Gas	N.E.	N.E.
Titanium Dioxide	>7500 mg/kg (Rat, Oral)	N.E.
n-Butyl Acetate	13100 mg/kg (Rat, Oral)	2000 ppm (Rat, Inhalation, 4 Hr)
Xylene	4300 mg/kg (Rat, Oral)	5000 ppm (Rat, Inhalation, 4Hr)
Methyl Ethyl Ketone	N.D.	N.D.
Magnesium Silicate	N.E.	TCLo: 11 mg/m3 (Inhalation)
Ethylene Glycol Monobutyl Ether	1519 mg/kg (ORAL, MOUSE)	700 PPM (INH 7 Hr, RAT)
Mineral Spirits	>8 mg/kg (Rat, Oral)	>1400 ppm (Rat, Inhalation, 4Hr)
Propylene Glycol Monobutyl Ether	2200 mg/kg (ORAL, RAT)	N.D.
Toluene	636 mg/kg (Rat, Oral)	49 g/m3 (Rat, Inhalation)
Ethylbenzene	3500 mg/kg (Rat, Oral)	N.E.
Aromatic Solvent	4700 mg/kg (Rat, Oral)	3670 mg/kg (Rat, Inhalation)
Aromatic Petroleum Distillates	4900 mg/kg (Rat, Oral)	N.E.

1,2,4-Trimethylbenzene	N.E.	18000 mg/m3 (Rat, 4Hr)
Calcined Aluminum Silicate	5000 mg/kg (ORAL RAT)	N.D.
Pigment Black 7	>8000 mg/kg (Rat, Oral)	N.E.
Pigment Yellow 17	N.D.	N.D.
Pigment Violet 32	>10000 mg/kg (Rat, Oral)	N.E.
Quartz (Crystalline Silica)	N.E.	N.E.

Section 12 - Ecological Information

Ecological Information: Product is a mixture of listed components.

Section 13 - Disposal Information

Disposal Information: Dispose of material in accordance to local, state and federal regulations and ordinances. Do not allow to enter storm drains or sewer systems.

Section 14 - Transportation Information

DOT Proper Shipping Name:	Aerosol	Packing Group:	---
DOT Technical Name:	---	Hazard Subclass:	---
DOT Hazard Class:	2.1	Resp. Guide Page:	126
DOT UN/NA Number:	UN1950		

Section 15 - Regulatory Information

CERCLA - SARA Hazard Category

This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 311and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

IMMEDIATE HEALTH HAZARD, CHRONIC HEALTH HAZARD, FIRE HAZARD

SARA Section 313:

Listed below are the substances (if any) contained in this product that are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

Chemical Name	CAS Number
Xylene	1330-20-7
Methyl Ethyl Ketone	78-93-3
Ethylene Glycol Monobutyl Ether	111-76-2
Toluene	108-88-3
Ethylbenzene	100-41-4
Aromatic Petroleum Distillates	64742-94-5
1,2,4-Trimethylbenzene	95-63-6

Toxic Substances Control Act:

Listed below are the substances (if any) contained in this product that are subject to the reporting requirements of TSCA 12(B) if exported from the United States:

None known

U.S. State Regulations: As follows -

New Jersey Right-to-Know:

The following materials are non-hazardous, but are among the top five components in this product.

Chemical Name	CAS Number
Alkyd Resin	PROPRIETARY

Pennsylvania Right-to-Know:

The following non-hazardous ingredients are present in the product at greater than 3%.

Chemical Name	CAS Number
Alkyd Resin	PROPRIETARY
Barium Sulfate	7727-43-7
Calcium Carbonate	1317-65-3
Yellow Iron Oxide	51274-00-1

California Proposition 65:

WARNING! This product contains a chemical(s) known by the State of California to cause cancer.

WARNING! This product contains a chemical(s) known to the state of California to cause birth defects or other reproductive harm.

International Regulations: As follows -

CANADIAN WHMIS:

This MSDS has been prepared in compliance with Controlled Product Regulations except for the use of the 16 headings.

CANADIAN WHMIS CLASS: AB5, D2A, D2B

Section 16 - Other Information

HMIS Ratings:

Health: 2 Flammability: 4 Reactivity: 0 Personal Protection: X

REASON FOR REVISION:

Legend: N.A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined

The information contained on this MSDS has been checked and should be accurate. However, it is the responsibility of the user to comply with all Federal, State, and Local laws and regulations.

Material Safety Data Sheet

24 Hour Assistance:
1-847-367-7700
Rust-Oleum Corp.
www.rustoleum.com

Section 1 - Chemical Product / Company Information

Product Name:	PRO LSPR 6PK SEMIGLOSS WHITE	Revision Date:	06/30/2011
Identification Number:	239108		
Product Use/Class:	Topcoat/Aerosol		
Supplier:	Rust-Oleum Corporation 11 Hawthorn Parkway Vernon Hills, IL 60061 USA	Manufacturer:	Rust-Oleum Corporation 11 Hawthorn Parkway Vernon Hills, IL 60061 USA
Preparer:	Regulatory Department		

Section 2 - Composition / Information On Ingredients

Chemical Name	CAS Number	Weight % Less Than	ACGIH TLV-TWA	ACGIH TLV-STEL	OSHA PEL-TWA	OSHA PEL CEILING
Liquefied Petroleum Gas	68476-86-8	25.0	N.E.	N.E.	N.E.	N.E.
Acetone	67-64-1	20.0	500 ppm	750 ppm	1000 ppm	N.E.
Titanium Dioxide	13463-67-7	15.0	10 mg/m3	N.E.	15 mg/m3 (Total Dust)	N.E.
Xylene	1330-20-7	10.0	100 ppm	150 ppm	100 ppm	N.E.
n-Butyl Acetate	123-86-4	10.0	150 ppm	200 ppm	150 ppm	N.E.
Magnesium Silicate	14807-96-6	10.0	2 mg/m3	N.E.	0.1 mg/m3 (Respirable)	N.E.
Propylene Glycol Monobutyl Ether	5131-66-8	5.0	N.E.	N.E	N.E	N.E.
Ethylbenzene	100-41-4	5.0	100 ppm	125 ppm	100 ppm	N.E

Section 3 - Hazards Identification

*** Emergency Overview ***: Contents Under Pressure. Harmful if inhaled. May affect the brain or nervous system causing dizziness, headache or nausea. Vapors may cause flash fire or explosion. Harmful if swallowed. Extremely flammable liquid and vapor.

Effects Of Overexposure - Eye Contact: Causes eye irritation.

Effects Of Overexposure - Skin Contact: Prolonged or repeated contact may cause skin irritation. Substance may cause slight skin irritation.

Effects Of Overexposure - Inhalation: High vapor concentrations are irritating to the eyes, nose, throat and lungs. Avoid breathing vapors or mists. High gas, vapor, mist or dust concentrations may be harmful if inhaled. Harmful if inhaled.

Effects Of Overexposure - Ingestion: Aspiration hazard if swallowed; can enter lungs and cause damage. Substance may be harmful if swallowed.

Effects Of Overexposure - Chronic Hazards: IARC lists Ethylbenzene as a possible human carcinogen (group 2B). Contains Titanium Dioxide. Titanium Dioxide is listed as a Group 2B-"Possibly carcinogenic to humans" by IARC. Significant exposure is not anticipated during brush application or drying. Risk of overexposure depends on

duration and level of exposure to dust from repeated sanding of surfaces or spray mist and the actual concentration of Titanium Dioxide in the formula.
May cause central nervous system disorder (e.g., narcosis involving a loss of coordination, weakness, fatigue, mental confusion, and blurred vision) and/or damage. Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Overexposure to xylene in laboratory animals has been associated with liver abnormalities, kidney, lung, spleen, eye and blood damage as well as reproductive disorders. Effects in humans, due to chronic overexposure, have included liver, cardiac abnormalities and nervous system damage.

Primary Route(s) Of Entry: Skin Contact, Skin Absorption, Inhalation, Ingestion, Eye Contact

Section 4 - First Aid Measures

First Aid - Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes holding eyelids open. Get medical attention. Do NOT allow rubbing of eyes or keeping eyes closed.

First Aid - Skin Contact: Wash with soap and water. Get medical attention if irritation develops or persists.

First Aid - Inhalation: If you experience difficulty in breathing, leave the area to obtain fresh air. If continued difficulty is experienced, get medical assistance immediately.

First Aid - Ingestion: Aspiration hazard: Do not induce vomiting or give anything by mouth because this material can enter the lungs and cause severe lung damage. Get immediate medical attention.

Section 5 - Fire Fighting Measures

Flash Point: -156 F (Setaflash)

Extinguishing Media: Film Forming Foam, Carbon Dioxide, Dry Chemical, Water Fog

Unusual Fire And Explosion Hazards: FLASH POINT IS LESS THAN 20 °. F. - EXTREMELY FLAMMABLE LIQUID AND VAPOR! Perforation of the pressurized container may cause bursting of the can. Isolate from heat, electrical equipment, sparks and open flame. Water spray may be ineffective. Closed containers may explode when exposed to extreme heat. Vapors may form explosive mixtures with air. Vapors can travel to a source of ignition and flash back. Keep containers tightly closed.

Special Firefighting Procedures: Evacuate area and fight fire from a safe distance.

Section 6 - Accidental Release Measures

Steps To Be Taken If Material Is Released Or Spilled: Remove all sources of ignition, ventilate area and remove with inert absorbent and non-sparking tools. Dispose of according to local, state (provincial) and federal regulations. Do not incinerate closed containers. Contain spilled liquid with sand or earth. DO NOT use combustible materials such as sawdust.

Section 7 - Handling And Storage

Handling: Wash thoroughly after handling. Wash hands before eating. Avoid breathing vapor or mist. Use only in a well-ventilated area. Follow all MSDS/label precautions even after container is emptied because it may retain product residues.

Storage: Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame. Do not store above 120 ° F. Store large quantities in buildings designed and protected for storage of NFPA Class I

flammable liquids. Contents under pressure. Do not expose to heat or store above 120 ° F.

Section 8 - Exposure Controls / Personal Protection

Engineering Controls: Prevent build-up of vapors by opening all doors and windows to achieve cross-ventilation. Use explosion-proof ventilation equipment. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

Respiratory Protection: A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. A NIOSH/MSHA approved air purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits.

Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or in any other circumstances where air purifying respirators may not provide adequate protection.

Skin Protection: Nitrile or Neoprene gloves may afford adequate skin protection. Use impervious gloves to prevent skin contact and absorption of this material through the skin.

Eye Protection: Use safety eyewear designed to protect against splash of liquids.

Other protective equipment: Refer to safety supervisor or industrial hygienist for further information regarding personal protective equipment and its application.

Hygienic Practices: Wash thoroughly with soap and water before eating, drinking or smoking.

Section 9 - Physical And Chemical Properties

Vapor Density:	Heavier than Air	Odor:	Solvent Like
Appearance:	Aerosolized Mist	Evaporation Rate:	Faster than Ether
Solubility in H2O:	Slight	Freeze Point:	N.D.
Specific Gravity:	0.861	pH:	N.A.
Physical State:	Liquid		

(See section 16 for abbreviation legend)

Section 10 - Stability And Reactivity

Conditions To Avoid: Avoid temperatures above 120 ° F. Avoid all possible sources of ignition.

Incompatibility: Incompatible with strong oxidizing agents, strong acids and strong alkalies.

Hazardous Decomposition: By open flame, carbon monoxide and carbon dioxide. When heated to decomposition, it emits acrid smoke and irritating fumes.

Hazardous Polymerization: Will not occur under normal conditions.

Stability: This product is stable under normal storage conditions.

Section 11 - Toxicological Information

Chemical Name	LD50	LC50
Liquefied Petroleum Gas	N.E.	N.E.
Acetone	5800 mg/kg (Rat)	50100 mg/m3 (Rat, 8Hr)
Titanium Dioxide	>7500 mg/kg (Rat, Oral)	N.E.
Xylene	4300 mg/kg (Rat, Oral)	5000 ppm (Rat, Inhalation, 4Hr)
n-Butyl Acetate	13100 mg/kg (Rat, Oral)	2000 ppm (Rat, Inhalation, 4 Hr)
Magnesium Silicate	N.E.	TCLo: 11 mg/m3 (Inhalation)
Propylene Glycol Monobutyl Ether	2200 mg/kg (Rat, Oral)	N.E.
Ethylbenzene	3500 mg/kg (Rat, Oral)	N.E.

Section 12 - Ecological Information

Ecological Information: Product is a mixture of listed components.

Section 13 - Disposal Information

Disposal Information: Dispose of material in accordance to local, state and federal regulations and ordinances. Do not allow to enter storm drains or sewer systems.

Section 14 - Transportation Information

	Domestic (USDOT)	International (IMDG)	Air (IATA)
Proper Shipping Name:	Consumer Commodity	Aerosols	Aerosols
Hazard Class:	ORM-D	2.1	2.1
UN Number:	N.A.	UN1950	UN1950
Packing Group:	N.A.	N.A.	N.A.
Limited Quantity:	No	Yes	Yes

Section 15 - Regulatory Information

CERCLA - SARA Hazard Category

This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 311and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

IMMEDIATE HEALTH HAZARD, CHRONIC HEALTH HAZARD, FIRE HAZARD, PRESSURIZED GAS HAZARD

SARA Section 313:

Listed below are the substances (if any) contained in this product that are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

Chemical Name	CAS Number
Xylene	1330-20-7
Ethylbenzene	100-41-4

Toxic Substances Control Act:

Listed below are the substances (if any) contained in this product that are subject to the reporting requirements of TSCA 12(B) if exported from the United States:

U.S. State Regulations: As follows -

New Jersey Right-to-Know:

The following materials are non-hazardous, but are among the top five components in this product.

Chemical Name	CAS Number
Alkyd Resin	PROPRIETARY

Pennsylvania Right-to-Know:

The following non-hazardous ingredients are present in the product at greater than 3%.

Chemical Name	CAS Number
Alkyd Resin	PROPRIETARY

International Regulations: As follows -

CANADIAN WHMIS:

This MSDS has been prepared in compliance with Controlled Product Regulations except for the use of the 16 headings.

CANADIAN WHMIS CLASS: AB5 D2A D2B

Section 16 - Other Information

HMIS Ratings:

Health: 2*	Flammability: 4	Reactivity: 0	Personal Protection: X

NFPA Ratings:

Health: 2	Flammability: 4	Instability: 0

VOLATILE ORGANIC COMPOUNDS, g/L: 507

REASON FOR REVISION: Regulatory Update

Legend: N.A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined

Rust-Oleum Corporation believes, to the best of its knowledge, information and belief, the information contained herein to be accurate and reliable as of the date of this material safety data sheet. However, because the conditions of handling, use, and storage of these materials are beyond our control, we assume no responsibility or liability for personal injury or property damage incurred by the use of these materials. Rust-Oleum Corporation makes no warranty, expressed or implied, regarding the accuracy or reliability of the data or results obtained from their use. All materials may present unknown hazards and should be used with caution. The information and recommendations in this material safety data sheet are offered for the users' consideration and examination. It is the responsibility of the user to determine the final suitability of this information and to comply with all applicable international, federal, state, and local laws and regulations.

Material Safety Data Sheet

24 Hour Assistance:
1-847-367-7700
Rust-Oleum Corp.
www.rustoleum.com

Section 1 - Chemical Product / Company Information

Product Name:	STRUST +SSPR 6PK GLOSS SUNBURST YELLOW	Revision Date:	10/12/2011
Identification Number:	7747830		
Product Use/Class:	Topcoat/Aerosols		
Supplier:	Rust-Oleum Corporation 11 Hawthorn Parkway Vernon Hills, IL 60061 USA	Manufacturer:	Rust-Oleum Corporation 11 Hawthorn Parkway Vernon Hills, IL 60061 USA
Preparer:	Regulatory Department		

Section 2 - Composition / Information On Ingredients

Chemical Name	CAS Number	Weight % Less Than	ACGIH TLV-TWA	ACGIH TLV-STEL	OSHA PEL-TWA	OSHA PEL CEILING
Acetone	67-64-1	30.0	500 ppm	750 ppm	1000 ppm	N.E.
Liquefied Petroleum Gas	68476-86-8	30.0	N.E.	N.E.	N.E.	N.E.
Xylene	1330-20-7	10.0	100 ppm	150 ppm	100 ppm	N.E.
n-Butyl Acetate	123-86-4	10.0	150 ppm	200 ppm	150 ppm	N.E.
Titanium Dioxide	13463-67-7	5.0	10 mg/m3	N.E.	15 mg/m3 (Total Dust)	N.E.
Ethylbenzene	100-41-4	5.0	100 ppm	125 ppm	100 ppm	N.E.
Propylene Glycol Monobutyl Ether	5131-66-8	5.0	N.E.	N.E.	N.E.	N.E.

Section 3 - Hazards Identification

*** Emergency Overview ***: Harmful if inhaled. May affect the brain or nervous system causing dizziness, headache or nausea. Contents Under Pressure. Vapors may cause flash fire or explosion. Harmful if swallowed. Extremely flammable liquid and vapor.

Effects Of Overexposure - Eye Contact: Causes eye irritation.

Effects Of Overexposure - Skin Contact: Prolonged or repeated contact may cause skin irritation. Substance may cause slight skin irritation.

Effects Of Overexposure - Inhalation: High vapor concentrations are irritating to the eyes, nose, throat and lungs. Avoid breathing vapors or mists. Harmful if inhaled. High gas, vapor, mist or dust concentrations may be harmful if inhaled.

Effects Of Overexposure - Ingestion: Aspiration hazard if swallowed; can enter lungs and cause damage. Substance may be harmful if swallowed.

Effects Of Overexposure - Chronic Hazards: IARC lists Ethylbenzene as a possible human carcinogen (group 2B). Contains Titanium Dioxide. Titanium Dioxide is listed as a Group 2B-"Possibly carcinogenic to humans" by

IARC. Significant exposure is not anticipated during brush application or drying. Risk of overexposure depends on duration and level of exposure to dust from repeated sanding of surfaces or spray mist and the actual concentration of Titanium Dioxide in the formula.
May cause central nervous system disorder (e.g., narcosis involving a loss of coordination, weakness, fatigue, mental confusion, and blurred vision) and/or damage. Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Overexposure to xylene in laboratory animals has been associated with liver abnormalities, kidney, lung, spleen, eye and blood damage as well as reproductive disorders. Effects in humans, due to chronic overexposure, have included liver, cardiac abnormalities and nervous system damage.

Primary Route(s) Of Entry: Skin Contact, Skin Absorption, Inhalation, Ingestion, Eye Contact

Section 4 - First Aid Measures

First Aid - Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes holding eyelids open. Get medical attention. Do NOT allow rubbing of eyes or keeping eyes closed.

First Aid - Skin Contact: Wash with soap and water. Get medical attention if irritation develops or persists.

First Aid - Inhalation: If you experience difficulty in breathing, leave the area to obtain fresh air. If continued difficulty is experienced, get medical assistance immediately.

First Aid - Ingestion: Aspiration hazard: Do not induce vomiting or give anything by mouth because this material can enter the lungs and cause severe lung damage. Get immediate medical attention.

Section 5 - Fire Fighting Measures

Flash Point: -156 F (Setaflash)

Extinguishing Media: Film Forming Foam, Carbon Dioxide, Dry Chemical, Dry Sand, Water Fog

Unusual Fire And Explosion Hazards: Perforation of the pressurized container may cause bursting of the can. Isolate from heat, electrical equipment, sparks and open flame. Keep containers tightly closed. Vapors can travel to a source of ignition and flash back. Vapors may form explosive mixtures with air. Closed containers may explode when exposed to extreme heat. FLASH POINT IS LESS THAN 20 °. F. - EXTREMELY FLAMMABLE LIQUID AND VAPOR! Water spray may be ineffective.

Special Firefighting Procedures: Evacuate area and fight fire from a safe distance.

Section 6 - Accidental Release Measures

Steps To Be Taken If Material Is Released Or Spilled: Contain spilled liquid with sand or earth. DO NOT use combustible materials such as sawdust. Remove all sources of ignition, ventilate area and remove with inert absorbent and non-sparking tools. Dispose of according to local, state (provincial) and federal regulations. Do not incinerate closed containers.

Section 7 - Handling And Storage

Handling: Wash thoroughly after handling. Wash hands before eating. Use only in a well-ventilated area. Avoid breathing vapor or mist. Follow all MSDS/label precautions even after container is emptied because it may retain product residues.

Storage: Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame. Do not

store above 120 ° F. Store large quantities in buildings designed and protected for storage of NFPA Class I flammable liquids. Contents under pressure. Do not expose to heat or store above 120 ° F.

Section 8 - Exposure Controls / Personal Protection

Engineering Controls: Use explosion-proof ventilation equipment. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Prevent build-up of vapors by opening all doors and windows to achieve cross-ventilation.

Respiratory Protection: A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. A NIOSH/MSHA approved air purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits.

Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or in any other circumstances where air purifying respirators may not provide adequate protection.

Skin Protection: Nitrile or Neoprene gloves may afford adequate skin protection. Use impervious gloves to prevent skin contact and absorption of this material through the skin.

Eye Protection: Use safety eyewear designed to protect against splash of liquids.

Other protective equipment: Refer to safety supervisor or industrial hygienist for further information regarding personal protective equipment and its application.

Hygienic Practices: Wash thoroughly with soap and water before eating, drinking or smoking.

Section 9 - Physical And Chemical Properties

Vapor Density:	Heavier than Air	Odor:	Solvent Like
Appearance:	Aerosolized Mist	Evaporation Rate:	Faster than Ether
Solubility in H2O:	Slight	Freeze Point:	N.D.
Specific Gravity:	0.794	pH:	N.A.
Physical State:	Liquid		

(See section 16 for abbreviation legend)

Section 10 - Stability And Reactivity

Conditions To Avoid: Avoid temperatures above 120 ° F. Avoid all possible sources of ignition.

Incompatibility: Incompatible with strong oxidizing agents, strong acids and strong alkalies.

Hazardous Decomposition: When heated to decomposition, it emits acrid smoke and irritating fumes. By open flame, carbon monoxide and carbon dioxide.

Hazardous Polymerization: Will not occur under normal conditions.

Stability: This product is stable under normal storage conditions.

Section 11 - Toxicological Information

Chemical Name	LD50	LC50
Acetone	5800 mg/kg (Rat)	50100 mg/m3 (Rat, 8Hr)
Liquefied Petroleum Gas	N.E.	N.E.
Xylene	4300 mg/kg (Rat, Oral)	5000 ppm (Rat, Inhalation, 4Hr)
n-Butyl Acetate	13100 mg/kg (Rat, Oral)	2000 ppm (Rat, Inhalation, 4 Hr)
Titanium Dioxide	>7500 mg/kg (Rat, Oral)	N.E.
Ethylbenzene	3500 mg/kg (Rat, Oral)	N.E.
Propylene Glycol Monobutyl Ether	2200 mg/kg (Rat, Oral)	N.E.

Section 12 - Ecological Information

Ecological Information: Product is a mixture of listed components.

Section 13 - Disposal Information

Disposal Information: Dispose of material in accordance to local, state and federal regulations and ordinances. Do not allow to enter storm drains or sewer systems.

Section 14 - Transportation Information

	Domestic (USDOT)	International (IMDG)	Air (IATA)
Proper Shipping Name:	Consumer Commodity	Aerosols	Aerosols
Hazard Class:	ORM-D	2.1	2.1
UN Number:	N.A.	UN1950	UN1950
Packing Group:	N.A.	N.A.	N.A.
Limited Quantity:	No	Yes	Yes

Section 15 - Regulatory Information

CERCLA - SARA Hazard Category

This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 311and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

IMMEDIATE HEALTH HAZARD, CHRONIC HEALTH HAZARD, FIRE HAZARD, PRESSURIZED GAS HAZARD

SARA Section 313:

Listed below are the substances (if any) contained in this product that are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

Chemical Name	CAS Number
Xylene	1330-20-7
Ethylbenzene	100-41-4

Toxic Substances Control Act:

Listed below are the substances (if any) contained in this product that are subject to the reporting requirements of TSCA 12(B) if exported from the United States:

U.S. State Regulations: As follows -

New Jersey Right-to-Know:

The following materials are non-hazardous, but are among the top five components in this product.

Chemical Name	CAS Number
Modified Alkyd Resin	PROPRIETARY

Pennsylvania Right-to-Know:

The following non-hazardous ingredients are present in the product at greater than 3%.

Chemical Name	CAS Number
Modified Alkyd Resin	PROPRIETARY
Barium Sulfate	7727-43-7

International Regulations: As follows -

CANADIAN WHMIS:

This MSDS has been prepared in compliance with Controlled Product Regulations except for the use of the 16 headings.

CANADIAN WHMIS CLASS: AB5 D2A D2B

Section 16 - Other Information

HMIS Ratings:

Health: 2*	Flammability: 4	Physical Hazard: 0	Personal Protection: X

NFPA Ratings:

Health: 2	Flammability: 4	Instability: 0

VOLATILE ORGANIC COMPOUNDS, g/L: 509

REASON FOR REVISION: Regulatory Update

Legend: N.A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined

Rust-Oleum Corporation believes, to the best of its knowledge, information and belief, the information contained herein to be accurate and reliable as of the date of this material safety data sheet. However, because the conditions of handling, use, and storage of these materials are beyond our control, we assume no responsibility or liability for personal injury or property damage incurred by the use of these materials. Rust-Oleum Corporation makes no warranty, expressed or implied, regarding the accuracy or reliability of the data or results obtained from their use. All materials may present unknown hazards and should be used with caution. The information and recommendations in this material safety data sheet are offered for the users' consideration and examination. It is the responsibility of the user to determine the final suitability of this information and to comply with all applicable

international, federal, state, and local laws and regulations.

Material Safety Data Sheet

24 Hour Assistance:
1-847-367-7700
Rust-Oleum Corp.
www.rustoleum.com

Section 1 - Chemical Product / Company Information

Product Name:	PTOUCH 2X +SSPR 6PK SEMI-GLS CLEAR	Revision Date:	05/06/2011
Identification Number:	249859		
Product Use/Class:	Clear/Aerosols		
Supplier:	Rust-Oleum Corporation 11 Hawthorn Parkway Vernon Hills, IL 60061 USA	Manufacturer:	Rust-Oleum Corporation 11 Hawthorn Parkway Vernon Hills, IL 60061 USA
Preparer:	Regulatory Department		

Section 2 - Composition / Information On Ingredients

Chemical Name	CAS Number	Weight % Less Than	ACGIH TLV-TWA	ACGIH TLV-STEL	OSHA PEL-TWA	OSHA PEL CEILING
Acetone	67-64-1	30.0	500 ppm	750 ppm	1000 ppm	N.E
Liquefied Petroleum Gas	68476-86-8	25.0	N.E.	N.E.	N E	N E
Toluene	108-88-3	20.0	20 ppm	N.E.	200 ppm	300 ppm
n-Butyl Acetate	123-86-4	10.0	150 ppm	200 ppm	150 ppm	N E.
Aliphatic Hydrocarbon	64742-89-8	5.0	100 ppm	N.E.	100 ppm	N E.
Solvent Naptha, Light Aromatic	64742-95-6	5.0	N E.	N.E.	N.E.	N E.
1,2,4-Trimethylbenzene	95-63-6	5.0	25 ppm	N.E	N E	N E.
bis(2-ethylhexyl)-1,4-benzenedicarboxylate	6422-86-2	5.0	N E	N.E.	N E.	N.E.
Propylene Glycol Monobutyl Ether	5131-66-8	5.0	N E	N.E.	N.E.	N E

Section 3 - Hazards Identification

*** Emergency Overview ***: Contents Under Pressure. Harmful if inhaled. May affect the brain or nervous system causing dizziness, headache or nausea. Vapors may cause flash fire or explosion. Harmful if swallowed. Extremely flammable liquid and vapor.

Effects Of Overexposure - Eye Contact: Causes eye irritation.

Effects Of Overexposure - Skin Contact: Prolonged or repeated contact may cause skin irritation. Substance may cause slight skin irritation.

Effects Of Overexposure - Inhalation: High vapor concentrations are irritating to the eyes, nose, throat and lungs. Avoid breathing vapors or mists. High gas, vapor, mist or dust concentrations may be harmful if inhaled. Harmful if inhaled.

Effects Of Overexposure - Ingestion: Aspiration hazard if swallowed; can enter lungs and cause damage. Substance may be harmful if swallowed.

Effects Of Overexposure - Chronic Hazards: May cause central nervous system disorder (e.g., narcosis involving a loss of coordination, weakness, fatigue, mental confusion, and blurred vision) and/or damage. Reports have

associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage.

Primary Route(s) Of Entry: Skin Contact, Skin Absorption, Inhalation, Ingestion, Eye Contact

Section 4 - First Aid Measures

First Aid - Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes holding eyelids open. Get medical attention. Do NOT allow rubbing of eyes or keeping eyes closed.

First Aid - Skin Contact: Wash with soap and water. Get medical attention if irritation develops or persists.

First Aid - Inhalation: If you experience difficulty in breathing, leave the area to obtain fresh air. If continued difficulty is experienced, get medical assistance immediately.

First Aid - Ingestion: Aspiration hazard: Do not induce vomiting or give anything by mouth because this material can enter the lungs and cause severe lung damage. Get immediate medical attention.

Section 5 - Fire Fighting Measures

Flash Point: -156 F (Setaflash)

Extinguishing Media: Film Forming Foam, Carbon Dioxide, Dry Chemical, Water Fog

Unusual Fire And Explosion Hazards: FLASH POINT IS LESS THAN 20 °. F. - EXTREMELY FLAMMABLE LIQUID AND VAPOR! Perforation of the pressurized container may cause bursting of the can. Isolate from heat, electrical equipment, sparks and open flame. Keep containers tightly closed. Water spray may be ineffective. Closed containers may explode when exposed to extreme heat. Vapors may form explosive mixtures with air. Vapors can travel to a source of ignition and flash back.

Special Firefighting Procedures: Evacuate area and fight fire from a safe distance.

Section 6 - Accidental Release Measures

Steps To Be Taken If Material Is Released Or Spilled: Contain spilled liquid with sand or earth. DO NOT use combustible materials such as sawdust. Remove all sources of ignition, ventilate area and remove with inert absorbent and non-sparking tools. Dispose of according to local, state (provincial) and federal regulations. Do not incinerate closed containers.

Section 7 - Handling And Storage

Handling: Follow all MSDS/label precautions even after container is emptied because it may retain product residues. Use only in a well-ventilated area. Avoid breathing vapor or mist. Wash thoroughly after handling. Wash hands before eating.

Storage: Do not store above 120 ° F. Store large quantities in buildings designed and protected for storage of NFPA Class I flammable liquids. Contents under pressure. Do not expose to heat or store above 120 ° F. Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame.

Section 8 - Exposure Controls / Personal Protection

Engineering Controls: Prevent build-up of vapors by opening all doors and windows to achieve cross-ventilation.

Use explosion-proof ventilation equipment. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

Respiratory Protection: A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. A NIOSH/MSHA approved air purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits.

Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or in any other circumstances where air purifying respirators may not provide adequate protection.

Skin Protection: Nitrile or Neoprene gloves may afford adequate skin protection. Use impervious gloves to prevent skin contact and absorption of this material through the skin.

Eye Protection: Use safety eyewear designed to protect against splash of liquids.

Other protective equipment: Refer to safety supervisor or industrial hygienist for further information regarding personal protective equipment and its application.

Hygienic Practices: Wash thoroughly with soap and water before eating, drinking or smoking.

Section 9 - Physical And Chemical Properties

Vapor Density:	Heavier than Air	Odor:	Solvent Like
Appearance:	Aerosolized Mist	Evaporation Rate:	Faster than Ether
Solubility in H2O:	Slight	Freeze Point:	N.D.
Specific Gravity:	0.747	pH:	N.A.
Physical State:	Liquid		

(See section 16 for abbreviation legend)

Section 10 - Stability And Reactivity

Conditions To Avoid: Avoid temperatures above 120 ° F. Avoid all possible sources of ignition.

Incompatibility: Incompatible with strong oxidizing agents, strong acids and strong alkalies.

Hazardous Decomposition: By open flame, carbon monoxide and carbon dioxide. When heated to decomposition, it emits acrid smoke and irritating fumes.

Hazardous Polymerization: Will not occur under normal conditions.

Stability: This product is stable under normal storage conditions.

Section 11 - Toxicological Information

Chemical Name	LD50	LC50
Acetone	5800 mg/kg (Rat)	50100 mg/m3 (Rat, 8Hr)
Liquefied Petroleum Gas	N.E.	N.E.
Toluene	636 mg/kg (Rat, Oral)	>26700 ppm (Rat, Inhalation, 1Hr)
n-Butyl Acetate	13100 mg/kg (Rat, Oral)	2000 ppm (Rat, Inhalation, 4 Hr)
Aliphatic Hydrocarbon	>5000 mg/kg (Rat, Oral)	N.E.

Solvent Naptha, Light Aromatic	4700 mg/kg (Rat, Oral)	3670 mg/kg (Rat, Inhalation)
1,2,4-Trimethylbenzene	N.E.	18000 mg/m3 (Rat, 4Hr)
bis(2-ethylhexyl)-1,4-benzenedicarboxylate	>5000 mg/kg (Rat)	N.E.
Propylene Glycol Monobutyl Ether	2200 mg/kg (Rat, Oral)	N.E.

Section 12 - Ecological Information

Ecological Information: Product is a mixture of listed components.

Section 13 - Disposal Information

Disposal Information: Dispose of material in accordance to local, state and federal regulations and ordinances. Do not allow to enter storm drains or sewer systems.

Section 14 - Transportation Information

	Domestic (USDOT)	International (IMDG)	Air (IATA)
Proper Shipping Name:	Consumer Commodity	Aerosols	Aerosols
Hazard Class:	ORM-D	2.1	2.1
UN Number:	N.A.	N.A.	UN1950
Packing Group:	N.A.	N.A.	N.A.
Limited Quantity:	No	Yes	Yes

Section 15 - Regulatory Information

CERCLA - SARA Hazard Category

This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 311and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

IMMEDIATE HEALTH HAZARD, CHRONIC HEALTH HAZARD, FIRE HAZARD, PRESSURIZED GAS HAZARD

SARA Section 313:

Listed below are the substances (if any) contained in this product that are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

Chemical Name	CAS Number
Toluene	108-88-3
1,2,4-Trimethylbenzene	95-63-6

Toxic Substances Control Act:

Listed below are the substances (if any) contained in this product that are subject to the reporting requirements of TSCA 12(B) if exported from the United States:

U.S. State Regulations: As follows -

New Jersey Right-to-Know:

The following materials are non-hazardous, but are among the top five components in this product.

Chemical Name	CAS Number
Acrylic Resin	PROPRIETARY

Pennsylvania Right-to-Know:

The following non-hazardous ingredients are present in the product at greater than 3%.

Chemical Name	CAS Number
Acrylic Resin	PROPRIETARY

International Regulations: As follows -

CANADIAN WHMIS:

This MSDS has been prepared in compliance with Controlled Product Regulations except for the use of the 16 headings.

CANADIAN WHMIS CLASS: AB5 D2A D2B

Section 16 - Other Information

HMIS Ratings:

Health: 2*	Flammability: 4	Reactivity: 0	Personal Protection: X

NFPA Ratings:

Health: 2	Flammability: 4	Instability: 0

VOLATILE ORGANIC COMPOUNDS, g/L: 584

REASON FOR REVISION: Regulatory Update

Legend: N.A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined

Rust-Oleum Corporation believes, to the best of its knowledge, information and belief, the information contained herein to be accurate and reliable as of the date of this material safety data sheet. However, because the conditions of handling, use, and storage of these materials are beyond our control, we assume no responsibility or liability for personal injury or property damage incurred by the use of these materials. Rust-Oleum Corporation makes no warranty, expressed or implied, regarding the accuracy or reliability of the data or results obtained from their use. All materials may present unknown hazards and should be used with caution. The information and recommendations in this material safety data sheet are offered for the users' consideration and examination. It is the responsibility of the user to determine the final suitability of this information and to comply with all applicable international, federal, state, and local laws and regulations.

CRC MATERIAL SAFETY DATA SHEET

Section 1: Product & Company Identification

Product Name: **Brakleen® Brake Parts Cleaner – Non-chlorinated** (aerosol)

Product Number (s): **05088, 75088**

Product Use: Brake parts cleaner

Manufacturer / Supplier Contact Information:

In United States:
CRC Industries, Inc.
885 Louis Drive
Warminster, PA 18974
www.crcindustries.com
1-215-674-4300(General)
(800) 521-3168 (Technical)
(800) 272-4620 (Customer Service)

In Canada:
CRC Canada Co.
2-1246 Lorimar Drive
Mississauga, Ontario L5S 1R2
www.crc-canada.ca
1-905-670-2291

In Mexico:
CRC Industries Mexico
Av. Benito Juárez 4055 G
Colonia Orquídea
San Luís Potosí, SLP CP 78394
www.crc-mexico.com
52-444-824-1666

24-Hr Emergency – CHEMTREC: (800) 424-9300 or (703) 527-3887

Section 2: Hazards Identification

Emergency Overview

DANGER: Extremely Flammable. Harmful or Fatal if Swallowed. May Cause Blindness if Swallowed. Vapor Harmful. Eye and Skin Irritant. Contents Under Pressure.
Appearance & Odor: Clear liquid; solvent odor

Potential Health Effects:

ACUTE EFFECTS:

EYE: Moderate eye irritant. Exposure can cause irritation including stinging, tearing, redness, blurred vision, and swelling of the eyes.

SKIN: Moderate skin irritant. Prolonged or repeated contact may dry the skin. Symptoms may include redness, burning, drying and cracking of the skin, and skin burns. Passage of this material into the body through the skin is possible, but it is unlikely that this would result in harmful effects during safe handling and use.

INHALATION: Breathing large amounts of this material may be harmful. Symptoms include irritation of the nose and throat and central nervous system excitation (giddiness), followed by CNS depression (dizziness, drowsiness, weakness, headache, nausea, unconsciousness).

INGESTION: Swallowing small amounts is not likely to cause harmful effects. May cause stomach or intestinal upset. Swallowing larger amounts may be harmful as this material may be aspirated into the lungs during swallowing or vomiting. This results in lung inflammation and other lung injury.

CHRONIC EFFECTS: Overexposure to methanol may lead to visual impairment.

TARGET ORGANS: liver, kidneys, blood; central nervous system, eyes

Medical Conditions Aggravated by Exposure: skin sensitivities, lung conditions, central nervous system conditions

See Section 11 for toxicology and carcinogenicity information on product ingredients.

Section 3: Composition/Information on Ingredients

COMPONENT	CAS NUMBER	% by Wt.
Methanol	67-56-1	40 – 50
Toluene	108-88-3	15 – 25
Heptane	142-82-5 / 64742-49-0	15 – 25
Acetone	67-64-1	5 – 15
Carbon dioxide	124-38-9	5 – 10

Section 4: First Aid Measures

Eye Contact: Immediately flush with plenty of water for 15 minutes. Call a physician if irritation persists.

Skin Contact: Remove contaminated clothing and wash affected area with soap and water. Call a physician if irritation persists. Wash contaminated clothing prior to re-use.

Inhalation: Remove person to fresh air. Keep person calm. If not breathing, give artificial respiration. If breathing is difficult give oxygen. Call a physician.

Ingestion: Seek medical attention. Do NOT induce vomiting unless instructed by medical personnel. Have victim drink a glass of water if conscious.

Note to Physicians: This material is an aspiration hazard. This material (or a component) has produced hyperglycemia and ketosis following substantial ingestion. Inhalation of high concentrations of this material may be associated with cardiac arrhythmias. Sympathomimetic drugs may initiate cardiac arrhythmias in persons exposed to this material. This product contains methanol. The metabolites of methanol can cause metabolic acidosis, visual disturbances and blindness.

Section 5: Fire-Fighting Measures

Flammable Properties: This product is extremely flammable in accordance with aerosol flammability definitions. (See 16 CFR 1500.3(c)(6)).

Flash Point: 0°F / -18°C (TCC) Upper Explosive Limit: ND
Autoignition Temperature: 725°F / 385°C Lower Explosive Limit: ND

Fire and Explosion Data:

Suitable Extinguishing Media: Dry chemical, carbon dioxide, alcohol-resistant foam, Class B extinguishers

Products of Combustion: Oxides of carbon

Explosion Hazards: Aerosol containers, when exposed to heat from fire, may build pressure and explode. Vapors may accumulate in a confined space and create a flammable atmosphere.

Protection of Fire-Fighters: Firefighters should wear self-contained, NIOSH-approved breathing apparatus for protection against suffocation and possible toxic decomposition products. Proper eye and skin protection should be provided. Use water spray to keep fire-exposed containers cool and to knock down vapors which may result from product decomposition.

Section 6: Accidental Release Measures

Personal Precautions: Use personal protection recommended in Section 8.

Environmental Precautions: Take precautions to prevent contamination of ground and surface waters. Do not flush into sewers or storm drains.

Methods for Containment & Clean-up: Eliminate all sources of ignition. Dike area to contain spill. Ventilate the area with fresh air. If in confined space or limited air circulation area, clean-up workers should wear appropriate respiratory protection. Recover or absorb spilled material using an absorbent designed for chemical spills. Place used absorbents into proper waste containers.

Section 7: Handling and Storage

Handling Procedures: Do not use near potential sources of ignition. Do not use on energized equipment. Use with adequate ventilation. Avoid contact with skin and eyes. Avoid inhaling vapors. Use caution around energized equipment. The metal container will conduct electricity if it contacts a live source. This may result in injury to the user from electrical shock and/or flash fire. For product use instructions, please see the product label.

Storage Procedures: Store in a cool dry area out of direct sunlight. Aerosol cans must be maintained below 120°F / 49°C to prevent cans from rupturing.

Aerosol Storage Level: III

Section 8: Exposure Controls/Personal Protection

Exposure Guidelines:

	OSHA		ACGIH		OTHER		
COMPONENT	TWA	STEL	TWA	STEL	TWA	SOURCE	UNIT
Methanol	200	NE	200	250 (s)	NE		ppm
Toluene	200	300 (c)	20	NE	NE		ppm
Heptane	500	NE	400	500	NE		ppm
Acetone	1000	NE	500	750	NE		ppm
Carbon dioxide	5000	30000(v)	5000	30000	NE		ppm
N.E. – Not Established		(c) – ceiling		(s) – skin	(v) – vacated		

Controls and Protection:

Engineering Controls: Area should have ventilation to provide fresh air. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at the source, preventing dispersion into the general work area. Use mechanical means if necessary to maintain vapor levels below the exposure guidelines. If working in a confined space, follow applicable OSHA regulations.

Respiratory Protection: None required for normal work where adequate ventilation is provided. If engineering controls are not feasible or if exposure exceeds the applicable exposure limits, use a NIOSH-approved cartridge respirator with organic vapor cartridge. Air monitoring is needed to determine actual employee exposure levels. Use a self-contained breathing apparatus in confined spaces and for emergencies.

Eye/face Protection: For normal conditions, wear safety glasses. Where there is reasonable probability of liquid contact, wear splash-proof goggles.

Skin Protection: Use protective gloves such as nitrile, PVA, or neoprene. Also, use full protective clothing if there is prolonged or repeated contact of liquid with skin.

Section 9: Physical and Chemical Properties

Physical State: liquid
Color: clear
Odor: solvent
Odor Threshold: ND
Specific Gravity: 0.782
Initial Boiling Point: 132°F / 56°C
Freezing Point: ND
Vapor Pressure: ND
Vapor Density: > 1 (air = 1)
Evaporation Rate: fast
Solubility: slightly soluble in water
Coefficient of water/oil distribution: ND
pH: NA
Volatile Organic Compounds: wt %: 84.0 g/L: 657.2 lbs./gal: 5.5

Section 10: Stability and Reactivity

Stability: Stable

Conditions to Avoid: Sources of ignition; temperature extremes

Incompatible Materials: Acids, alkalis, reducing agents, strong oxidizing agents, hypochlorites, peroxides, reactive metals such as aluminum and magnesium, sodium, zinc

Hazardous Decomposition Products: Oxides of carbon, various hydrocarbons

Possibility of Hazardous Reactions: No

Section 11: Toxicological Information

Long-term toxicological studies have not been conducted for this product. The following information is available for components of this product.

Acute Toxicity:

Component	Oral LD50 (rat)	Dermal LD50 (rabbit)	Inhalation LC50 (rat)
Methanol	5600 mg/kg	15,800 mg/kg	81,000 mg/m^3/14H
Toluene	636 mg/kg	14,100 µL/kg	49 g/m^3/4H
Heptane	No data	No data	103 g/m^3/4H
Acetone	5800 mg/kg	No data	50,100 mg/m^3/8H
Carbon dioxide	No data	No data	470,000 ppm/30M

Chronic Toxicity:

Component	OSHA Carcinogen	IARC Carcinogen	NTP Carcinogen	Irritant	Sensitizer
Methanol	No	No	No	E & S (moderate)	Unknown
Toluene	No	No	No	E, S, R (mild)	Unknown
Heptane isomers	No	No	No	E & R (mild) / S (moderate)	Unknown
Acetone	No	No	No	E & S (moderate) / R (mild)	Yes
Carbon dioxide	No	No	No	No	No

E – Eye S – Skin R - Respiratory

Reproductive Toxicity: No information available
Teratogenicity: No information available
Mutagenicity: No information available
Synergistic Effects: No information available

Section 12: Ecological Information

Ecological studies have not been conducted for this product. The following information is available for components of this product.

Ecotoxicity: Acetone – 48H LC50 Daphnia: 10 mg/l
Persistence / Degradability: No information available
Bioaccumulation / Accumulation: No information available
Mobility in Environment: No information available

Section 13: Disposal Considerations

Waste Classification: The dispensed liquid product is a RCRA hazardous waste for the characteristic of ignitability with the following potential waste code(s): D001, F005. (See 40 CFR Part 261.20 – 261.33) Aerosol containers should be fully emptied and depressurized before disposal. Empty aerosol containers may be recycled.

All disposal activities must comply with federal, state, provincial and local regulations. Local regulations may be more stringent than state, provincial or national requirements.

Section 14: Transport Information

US DOT (ground): Consumer Commodity, ORM-D

ICAO/IATA (air): Consumer Commodity, ID8000, 9

IMO/IMDG (water): Aerosols, UN1950, 2.1, Limited Quantity

Special Provisions: None

Section 15: Regulatory Information

U.S. Federal Regulations:

Toxic Substances Control Act (TSCA):
All ingredients are either listed on the TSCA inventory or are exempt.

Comprehensive Environmental Response, Compensation and Liability Act (CERCLA):
Reportable Quantities (RQ's) exist for the following ingredients: Acetone (5000 lbs), Toluene (1000 lbs), Methanol (5000 lbs)

Spills or releases resulting in the loss of any ingredient at or above its RQ require immediate notification to the National Response Center (800-424-8802) and to your Local Emergency Planning Committee.

Superfund Amendments Reauthorization Act (SARA) Title III:
Section 302 Extremely Hazardous Substances (EHS): None

Section 311/312 Hazard Categories:

Fire Hazard	Yes
Reactive Hazard	No
Release of Pressure	Yes
Acute Health Hazard	Yes
Chronic Health Hazard	No

Section 313 Toxic Chemicals: This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:
Toluene (< 20%), Methanol (< 46%)

Clean Air Act:
Section 112 Hazardous Air Pollutants (HAPs): Toluene, Methanol

Occupational Safety and Health Administration:
This product is regulated by the Hazard Communications Standard.

U.S. State Regulations:

California Safe Drinking Water and Toxic Enforcement Act (Prop 65):
This product may contain the following chemicals known to the state of California to cause cancer, birth defects or other reproductive harm: Toluene

Consumer Products VOC Regulations: This product does not comply with Consumer Products VOC regulations and cannot be used in California, Connecticut, Delaware, The District of Columbia, Illinois, Indiana, Maine, Maryland, Massachusetts, Michigan, New Jersey, New Hampshire, New York, Ohio, Pennsylvania, Rhode Island, and parts of Utah and Virginia.

State Right to Know:

New Jersey:	67-64-1, 108-88-3, 67-56-1, 124-38-9, 142-82-5
Pennsylvania:	67-64-1, 108-88-3, 67-56-1, 124-38-9, 142-82-5
Massachusetts:	67-64-1, 108-88-3, 67-56-1, 124-38-9, 142-82-5
Rhode Island :	67-64-1, 108-88-3, 67-56-1, 124-38-9 142-82-5

Canadian Regulations:

Controlled Products Regulations:
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

WHMIS Hazard Class: A, B5, D1A, D2A, D2B

Canadian DSL Inventory: All ingredients are either listed on the DSL Inventory or are exempt.

European Union Regulations:

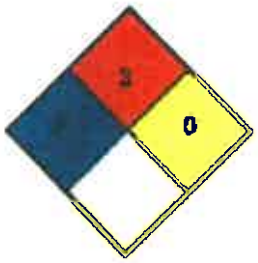
RoHS Compliance: This product is compliant with Directive 2002/95/EC of the European Parliament and of the Council of 27 January 2003. This product does not contain any of the restricted substances as listed in Article 4(1) of the RoHS Directive.

Additional Regulatory Information: None

Section 16: Other Information

HMIS® (II)	
Health:	2
Flammability:	3
Reactivity:	0
PPE:	B

NFPA



Ratings range from 0 (no hazard) to 4 (severe hazard)

Prepared By: Michelle Rudnick
CRC #: 483A
Revision Date: 08/26/2014

Changes since last revision: Section 15: Consumer Products VOC Regulations

The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. This information is accurate to the best of CRC Industries' knowledge or obtained from sources believed by CRC to be accurate. Before using any product, read all warnings and directions on the label. For further clarification of any information contained on this MSDS consult your supervisor, a health & safety professional, or CRC Industries.

ACGIH: American Conference of Governmental Industrial Hygienists
CAS: Chemical Abstract Service
CFR: Code of Federal Regulations
DOT: Department of Transportation
DSL: Domestic Substance List
g/L: grams per Liter
HMIS: Hazardous Materials Identification System
IARC: International Agency for Research on Cancer
IATA: International Air Transport Association
ICAO: International Civil Aviation Organization
IMDG: International Maritime Dangerous Goods
IMO: International Maritime Organization
lbs./gal: pounds per gallon
LC: Lethal Concentration
LD: Lethal Dose
NA: Not Applicable
ND: Not Determined
NIOSH: National Institute of Occupational Safety & Health
NFPA: National Fire Protection Association
NTP: National Toxicology Program
OSHA: Occupational Safety and Health Administration
PMCC: Pensky-Martens Closed Cup
PPE: Personal Protection Equipment
ppm: Parts per Million
RoHS: Restriction of Hazardous Substances
STEL: Short Term Exposure Limit
TCC: Tag Closed Cup
TWA: Time Weighted Average
WHMIS: Workplace Hazardous Materials Information System

Material Safety Data Sheet

1 - Chemical Product and Company Identification

Manufacturer: WD-40 Company **Address:** 1061 Cudahy Place (92110) P.O. Box 80607 San Diego, California, USA 92138 –0607 **Telephone:** **Emergency only:** 1-888-324-7596 (PROSAR) **Information:** 1-888-324-7596 **Chemical Spills:** 1-800-424-9300 (Chemtrec) 1-703-527-3887 (International Calls)	**Chemical Name:** Organic Mixture **Trade Name:** WD-40 Aerosol **Product Use:** Lubricant, Penetrant, Drives Out Moisture, Removes and Protects Surfaces From Corrosion **MSDS Date Of Preparation:** 3/11/10

2 – Hazards Identification

Emergency Overview:
DANGER! Flammable aerosol. Contents under pressure. Harmful or fatal if swallowed. If swallowed, may be aspirated and cause lung damage. May cause eye irritation. Avoid eye contact. Use with adequate ventilation. Keep away from heat, sparks and all other sources of ignition.

Symptoms of Overexposure:
Inhalation: High concentrations may cause nasal and respiratory irritation and central nervous system effects such as headache, dizziness and nausea. Intentional abuse may be harmful or fatal.
Skin Contact: Prolonged and/or repeated contact may produce mild irritation and defatting with possible dermatitis.
Eye Contact: Contact may be irritating to eyes. May cause redness and tearing.
Ingestion: This product has low oral toxicity. Swallowing may cause gastrointestinal irritation, nausea, vomiting and diarrhea. This product is an aspiration hazard. If swallowed, can enter the lungs and may cause chemical pneumonitis, severe lung damage and death.
Chronic Effects: None expected.
Medical Conditions Aggravated by Exposure: Preexisting eye, skin and respiratory conditions may be aggravated by exposure.

Suspected Cancer Agent:
Yes No X

3 - Composition/Information on Ingredients

Ingredient	CAS #	Weight Percent
Aliphatic Hydrocarbon	64742-47-8	45-50
Petroleum Base Oil	64742-58-1 64742-53-6 64742-56-9 64742-65-0	<25
LVP Aliphatic Hydrocarbon	64742-47-8	12-18
Carbon Dioxide	124-38-9	2-3
Surfactant	Proprietary	<2
Non-Hazardous Ingredients	Mixture	<10

4 – First Aid Measures

Ingestion (Swallowed): Aspiration Hazard. DO NOT induce vomiting. Call physician, poison control center or the WD-40 Safety Hotline at 1-888-324-7596 immediately.
Eye Contact: Flush thoroughly with water. Remove contact lenses if present after the first 5 minutes and continue flushing for several more minutes. Get medical attention if irritation persists.

Skin Contact: Wash with soap and water. If irritation develops and persists, get medical attention.
Inhalation (Breathing): If irritation is experienced, move to fresh air. Get medical attention if irritation or other symptoms develop and persist.

5 – Fire Fighting Measures

Extinguishing Media: Use water fog, dry chemical, carbon dioxide or foam. Do not use water jet or flooding amounts of water. Burning product will float on the surface and spread fire.
Special Fire Fighting Procedures: Firefighters should always wear positive pressure self-contained breathing apparatus and full protective clothing. Cool fire-exposed containers with water. Use shielding to protect against bursting containers.
Unusual Fire and Explosion Hazards: Contents under pressure. Keep away from ignition sources and open flames. Exposure of containers to extreme heat and flames can cause them to rupture often with violent force. Vapors are heavier than air and may travel along surfaces to remote ignition sources and flash back.

6 – Accidental Release Measures

Wear appropriate protective clothing (see Section 8). Eliminate all sources of ignition and ventilate area. Leaking cans should be placed in a plastic bag or open pail until the pressure has dissipated. Contain and collect liquid with an inert absorbent and place in a container for disposal. Clean spill area thoroughly. Report spills to authorities as required.

7 – Handling and Storage

Handling: Avoid contact with eyes. Avoid prolonged contact with skin. Avoid breathing vapors or aerosols. Use only with adequate ventilation. Keep away from heat, sparks, pilot lights, hot surfaces and open flames. Unplug electrical tools, motors and appliances before spraying or bringing the can near any source of electricity. Electricity can burn a hole in the can and cause contents to burst into flames. To avoid serious burn injury, do not let the can touch battery terminals, electrical connections on motors or appliances or any other source of electricity. Wash thoroughly with soap and water after handling. Keep containers closed when not in use. Keep out of the reach of children. Do not puncture, crush or incinerate containers, even when empty.
Storage: Store in a cool, well-ventilated area, away from incompatible materials Do not store above 120°F or in direct sunlight. U.F.C (NFPA 30B) Level 3 Aerosol.

8 – Exposure Controls/Personal Protection

Chemical	Occupational Exposure Limits
Aliphatic Hydrocarbon	1200 mg/m3 TWA (manufacturer recommended)
Petroleum Base Oil	5 mg/m3 TWA, 10 mg/m3 STEL ACGIH TLV 5 mg/m3 TWA OSHA PEL
LVP Aliphatic Hydrocarbon	1200 mg/m3 TWA (manufacturer recommended)
Carbon Dioxide	5000 ppm TWA (OSHA/ACGIH), 30,000 ppm STEL (ACGIH)
Surfactant	None Established
Non-Hazardous Ingredients	None Established

The Following Controls are Recommended for Normal Consumer Use of this Product
Engineering Controls: Use in a well-ventilated area.
Personal Protection:
Eye Protection: Avoid eye contact. Always spray away from your face.
Skin Protection: Avoid prolonged skin contact. Chemical resistant gloves recommended for operations where skin contact is likely.
Respiratory Protection: None needed for normal use with adequate ventilation.

For Bulk Processing or Workplace Use the Following Controls are Recommended
Engineering Controls: Use adequate general and local exhaust ventilation to maintain exposure levels below that occupational exposure limits.

Personal Protection:
Eye Protection: Safety goggles recommended where eye contact is possible.
Skin Protection: Wear chemical resistant gloves.
Respiratory Protection: None required if ventilation is adequate. If the occupational exposure limits are exceeded, wear a NIOSH approved respirator. Respirator selection and use should be based on contaminant type, form and concentration. Follow OSHA 1910.134, ANSI Z88.2 and good Industrial Hygiene practice.
Work/Hygiene Practices: Wash with soap and water after handling.

9 – Physical and Chemical Properties

Boiling Point:	361 - 369°F (183 - 187°C)	Specific Gravity:	0.8 – 0.82 @ 60°F
Solubility in Water:	Insoluble	pH:	Not Applicable
Vapor Pressure:	95-115 PSI @ 70°F	Vapor Density:	Greater than 1
Percent Volatile:	70-75%	VOC:	412 grams/liter (49.5%)
Coefficient of Water/Oil Distribution:	Not Determined	Appearance/Odor	Light amber liquid/mild odor
Flash Point:	122°F (49°C) Tag Open Cup (concentrate)	Flammable Limits: (Solvent Portion)	LEL: 0.6% UEL: 8.0%
Pour Point:	-63°C (-81.4°F) ASTM D-97	Kinematic Viscosity:	2.79-2.96cSt @ 100°F

10 – Stability and Reactivity

Stability: Stable
Hazardous Polymerization: Will not occur.
Conditions to Avoid: Avoid heat, sparks, flames and other sources of ignition. Do not puncture or incinerate containers.
Incompatibilities: Strong oxidizing agents.
Hazardous Decomposition Products: Carbon monoxide and carbon dioxide.

11 – Toxicological Information

The oral toxicity of this product is estimated to be greater than 5,000 mg/kg based on an assessment of the ingredients. This product is not classified as toxic by established criteria. It is an aspiration hazard.
None of the components of this product is listed as a carcinogen or suspected carcinogen or is considered a reproductive hazard.

12 – Ecological Information

No data is currently available.

13 - Disposal Considerations

If this product becomes a waste, it would be expected to meet the criteria of a RCRA ignitable hazardous waste (D001). However, it is the responsibility of the generator to determine at the time of disposal the proper classification and method of disposal. Dispose in accordance with federal, state, and local regulations.

14 – Transportation Information

DOT Surface Shipping Description: Consumer Commodity, ORM-D
IMDG Shipping Description: Un1950, Aerosols, 2.1, LTD QTY

15 – Regulatory Information

U.S. Federal Regulations:

CERCLA 103 Reportable Quantity: This product is not subject to CERCLA reporting requirements, however, oil spills are reportable to the National Response Center under the Clean Water Act and many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.
SARA TITLE III:
Hazard Category For Section 311/312: Acute Health, Fire Hazard, Sudden Release of Pressure
Section 313 Toxic Chemicals: This product contains the following chemicals subject to SARA Title III Section 313 Reporting requirements: None
Section 302 Extremely Hazardous Substances (TPQ): None
EPA Toxic Substances Control Act (TSCA) Status: All of the components of this product are listed on the TSCA inventory.
California Safe Drinking Water and Toxic Enforcement Act (Proposition 65): This product does not contain chemicals regulated under California Proposition 65.
VOC Regulations: This product complies with the consumer product VOC limits of CARB, the US EPA and states adopting the OTC VOC rules.
Canadian Environmental Protection Act: One of the components is listed on the NDSL. All of the other ingredients are listed on the Canadian Domestic Substances List or exempt from notification.
Canadian WHMIS Classification: Class B-5 (Flammable Aerosol)
This MSDS has been prepared according to the criteria of the Controlled Products Regulation (CPR) and the MSDS contains all of the information required by the CPR.

16 – Other Information:

HMIS Hazard Rating:
Health – 1 (slight hazard), Fire Hazard – 4 (severe hazard), Reactivity – 0 (minimal hazard)

SIGNATURE: Peter P. Ly TITLE: Director of Global Quality Assurance

REVISION DATE: March 2010 SUPERSEDES: August 2009

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MATERIAL SAFETY DATA SHEET

SPOTCHECK® CLEANER/REMOVER SKC-S

1 IDENTIFICATION

Company:	MAGNAFLUX
Address:	3624 West Lake Avenue, Glenview, Illinois 60026
Telephone No.:	847-657-5300 (Off-Hour Emergency Number - CHEMTREC - 1-800-424-9300).
Product Use:	Wipe on solvent cleaner/remover for penetrant inspection
Packages:	1 gallon can, 5 gallon pail, 55 gallon drums, aerosols
NFPA Rating:	Health 1, Flammability 3, Reactivity 0
PIN (Canada):	Bulk: UN1268
Revision Date:	April 13, 2007

2. HAZARDOUS INGREDIENTS

Ingredient	*Wt.Wt. %*	*CAS #*	*TLV*	*PEL*	*LD_{50}*	*LC_{50}*
Light aliphatic solvent naphtha	60-100	64742-89-8	300ppm (8 hr TWA)	not avail.	5 g/kg (oral/rat)	3400 ppm (4hrs/rat)
Carbon dioxide propellant (Aerosol Only)	3-7	124-38-9	not avail.	5000 ppm	not avail.	not avail.

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Flammable liquid and aerosol. Vapor may cause flash fire. Harmful or fatal if swallowed. Mist or vapor may irritate the respiratory tract. Liquid contact may cause eye and skin irritation. Over-exposure may cause central nervous system (CNS) depression and target organ effects. Spills may create a slipping hazard.

POTENTIAL HEALTH EFFECTS & SIGNS AND SYMPTOMS OF EXPOSURE:

Skin Contact: Irritating to skin. Repeated exposure may cause skin dryness or cracking.
Eyes: Vapors may be irritating to the eye.
Inhalation: Vapors expected to be slightly irritating. Vapors may cause drowsiness and dizziness.
Ingestion: Harmful: may cause lung damage if swallowed.
Medical conditions known to be aggravated by exposure to product: Pre-existing medical conditions of the following organ(s) or organ system(s) may be aggravated by exposure to this material: Eyes, Skin, Respiratory system.

4. FIRST AID

Skin Contact: Wash off with soap and water. Use soothing lotion.
Eyes: Rinse carefully under upper and lower eyelids using plenty of water. Rest eyes for 30 minutes. If redness, burning, blurred vision, or swelling persist, transport to the nearest medical facility for additional treatment.
Inhalation: Remove to fresh air if dizzy or nauseated. If rapid recovery does not occur, transport to nearest medical facility for additional treatment.
Ingestion: Do not induce vomiting. Transport to nearest medical facility for additional treatment. If vomiting occurs spontaneously, keep head below hips to prevent aspiration.

NOTE: In all severe cases, contact physician immediately. Local telephone operators can furnish number of regional poison control center.

5. FIRE HAZARD

Conditions of flammability: Bulk and aerosol: Readily ignited in presence of ignition sources.
Flash point: Min. 57°F (14°C) (Pensky-Martens) closed cup.
Flammable limits in air: 1% to 6%.
Extinguishing media: Carbon dioxide, foam
Special fire fighting procedures: Keep containers cool with water spray. Do not spray water directly on burning SKC-S. It will float and spread the fire.
Hazardous combustion products: Smoke, soot, oxides of carbon.
Unusual fire hazards: Aerosol cans may burst if heated above 130°F (54°C) and spray contents into a fire.

6. ACCIDENTAL RELEASE MEASURES

Mop up or sweep up with absorbent. Avoid contact with spilled or released material. Immediately remove all contaminated clothing. (For disposal, see Section 13.)

7. HANDLING AND STORAGE

Avoid eye contact. Avoid repeated or prolonged skin contact. Avoid breathing spray mist. Do not spray near arcs or flames. Use only in well ventilated areas. Wash thoroughly after handling.

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8. **EXPOSURE CONTROLS/PERSONAL PROTECTION**
Controls: Use where ventilation will carry spray mist away from occupied areas.
Personal protection: Wear safety glasses to protect eyes. Wear nitrile rubber gloves if hand exposure is unavoidable. Respirator with solvent vapor absorbing cartridge if used in enclosed, unventilated space.

9. **PHYSICAL PROPERTIES**
Initial boiling point (bulk): Min. 245°F (118°C) (ASTM D-86) *Vapor pressure:* 12 and 16 oz Aerosol: 105psi @ 75°F(24°C) Bulk: 1.5 – 2.0 kPa at 68.0°F

VOC Content (EPA Method 24):	750 g/L	*Vapor density:*	4.1
Density/sp. gravity:	0.76	*Evaporation rate:*	Fast
Water solubility:	0	*Appearance:*	Clear, colorless liquid
pH:	Neutral	*Odor:*	Naphtha odor

10. **STABILITY AND REACTIVITY**
Stability: Stable under normal conditions of use
Incompatibility: Avoid heat, sparks, open flames and other ignition sources. Avoid strong oxidizing agents.
Hazardous decomposition products: A complex mixture of airborne solids, liquids, and gases, including carbon monoxide, carbon dioxide and other organic compounds will be evolved when this material undergoes combustion or thermal or oxidative degradation.
Reactivity: None

11. **TOXICOLOGICAL INFORMATION**
Carcinogenicity: Contains no known or suspected carcinogens listed with OSHA, IARC, NTP, or ACGIH.
Threshold limit value: 300 ppm
WHMIS information (Canada): According to available information, the ingredients have not been found to show reproductive toxicity, teratogenicity, mutagenicity, skin sensitization, or synergistic toxic effects with other materials.

12. **ECOLOGICAL INFORMATION**
No data is available on SKC-S. It floats on water and evaporates away. It is 100% VOC.

13. **DISPOSAL**
As hazardous waste, send to licensed waste handler who can blend it into secondary fuels.
RCRA: Hazardous waste.
U.S. EPA Waste Number: D001

14 **TRANSPORTATION**
U.S. DOT: 49 CFR 172.101 Hazardous Materials Table

	Non-Aerosol	Aerosol
Proper shipping name:	Petroleum distillates, n.o.s.	Consumer Commodity
Hazard class or division:	3	ORM-D
Identification No.:	UN1268	None
Packing Group:	II	None

IATA: List of Dangerous Goods	Non-Aerosol	Aerosol
Proper shipping name:	Petroleum distillates, n.o.s.	Aerosols, flammable
Hazard class or division:	3	2.1
Identification No.:	UN1268	UN1950
Packing Group:	II	-

IMDG: General Index	Non-Aerosol	Aerosol
Proper shipping name:	PETROLEUM DISTILLATES,N.O.S.	AEROSOLS
Hazard class of division:	3.2	2.1
Identification No.:	UN1268	UN1950
Packing Group:	II	-

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15. **REGULATORY INFORMATION**

TSCA:	All ingredients are listed in TSCA inventory.
Canadian DSL:	All ingredients are listed in the Canadian DSL
CERCLA:	VM&P Naphtha (64742-89-8) Reportable Quantity 66,667 lbs.
SARA TITLE III, Section 313:	Xylene, Mixed Isomer (1330-20-7) <0.13%; meta-Xylene (108-38-3)< 0.05%; Ethylbenzene (100-41-4)< 0.03%; Benzene (71-43-2) <0.005%; Toluene (108-88-3) <0.01%
California Proposition 65:	Warning: This material may contain trace amounts of chemicals known to the state of California to cause cancer and/or birth defects and/or reproductive harm.
WHMIS Class (Canada):	Non-Aerosol: B-2, D-2B; Aerosol: A, B-5, D-2B

Note: This MSDS has been prepared to meet WHMIS (Canada) requirements with the exception of using 16 headings.

16. **OTHER INFORMATION**

Revision Statement:	Section 9
Supersedes:	October 26, 2004
Prepared by:	Tamie Simmons, Research Manager

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MATERIAL SAFETY DATA SHEET

SPOTCHECK® DEVELOPER SKD-S2

1. IDENTIFICATION

Company: MAGNAFLUX
Address: 3624 West Lake Avenue, Glenview, Illinois 60026
Telephone No.: 847-657-5300 (Off-Hour Emergency Number - CHEMTREC - 1-800-424-9300).
Product Use: Penetrant inspection developer
Packages: 1 gallon can, 5 gallon pail, 55 gallon drum, aerosol
NFPA Rating: Health 1, Flammability 3, (aerosol 4), Reactivity 0
PIN (Canada): UN 1993
Revision Date: September 5, 2007

2. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient	Wt./Wt.%	CAS#	TLV	PEL	LD_{50}	LC_{50}
2-propanol	40 – 70	67-63-0	400 ppm	400 ppm	3.6 g/kg(oral/mouse	Not available
2-propanone	10 – 30	67-64-1	750 ppm	750 ppm	8 g/kg (oral/rat)	Not available
Isobutane (propellent – aerosol only)	30	75-28-5	Not available	1000 ppm	Not available	Not available
Talc	1 - 3	14807-96-6	Not available	2 mg/me	Not available	Not available

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW
Extremely flammable white liquid and aerosol. Fast evaporating vapors can reach hazardous levels quickly in unventilated spaces.

POTENTIAL HEALTH EFFECTS & SIGNS AND SYMPTOMS OF EXPOSURE:
Skin Contact: Can irritate by removing natural skin oils on long or repeated exposures.
Eyes: Irritating, but does not damage eye tissue.
Inhalation: Causes dizziness and nausea.
Ingestion: Not significant in small (mouthful) amounts.
Medical conditions known to be aggravated by exposure to product: None

4. FIRST AID

Skin Contact: Remove contaminated clothing. Wash exposed areas with soap and water. Use soothing lotion
Eyes: Rinse carefully under upper and lower eyelids using plenty of water.
Inhalation: Remove to fresh air if dizzy or nauseated.
Ingestion: Do not induce vomiting. Accidental ingestion of a single mouthful is not expected to cause significant harm.
NOTE: In all severe cases, contact physician immediately. Local telephone operators can furnish number of regional poison control center.

5. FIRE HAZARD

Conditions of flammability: Non-aerosol and aerosol: Ignition will occur if used near flames, arcs or other ignition sources.
Flash point: 2°F (-16°C) (Pensky-Martens closed cup).
Flammable limits in air: 2% to 15%.
Extinguishing media: Carbon dioxide, foam, water.
Special fire fighting procedures: Keep containers cool with water spray.
Hazardous combustion products: Soot, oxides of carbon
Unusual fire hazards: Aerosol cans may burst over 130°F (54°C) and add to existing fire.

6. ACCIDENTAL RELEASE MEASURES

Turn off or remove sources of ignition. Mop up or sweep up with absorbent. (For disposal, see Section 13.)

7. HANDLING AND STORAGE

Avoid breathing vapors. Avoid eye contact. Avoid repeated or prolonged skin contact.
Store away from heat source. Do not spray around arcs or flame.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Controls: Use where ventilation will carry vapors away from occupied areas.
Personal protection : Wear safety glasses to protect eyes. Wear nitrile rubber gloves if hand exposure is unavoidable. Respirator with filter if sprayed in enclosed, unventilated space.

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9. **PHYSICAL PROPERTIES**

Initial boiling point (bulk):	132° F (55°C) (ASTM D-86)	*Vapor pressure:*	Bulk: 150mm @ 100°F (38°C). Aerosol: 65 psi @ 75°F (24°C)
Percent volatile:	90%	*Vapor density:*	3
Density/sp. gravity:	0.87	*Evaporation rate:*	0.4 of ether
Water solubility:	90	*Appearance:*	White liquid
pH:	Neutral	*Odor:*	Alcohol odor

10. **STABILITY AND REACTIVITY**

Stability:	Stable
Incompatibility:	None
Hazardous decomposition products:	When burning, soot, oxides of carbon
Reactivity:	None

11. **TOXICOLOGICAL INFORMATION**

Carcinogenicity:	Contains no known or suspected carcinogens listed with OSHA, IARC, NTP, or ACGIH.
Threshold limit value (Bulk):	400 ppm
WHMIS information (Canada):	According to available information, the ingredients have not been found to show reproductive toxicity, teratogenicity, mutagenicity, skin sensitization, or synergistic toxic effects with other materials.

12. **ECOLOGICAL INFORMATION**
No data is available on SKD-S2.

13. **DISPOSAL**
Send to a licensed waste facility for proper disposal.

RCRA:	Hazardous waste.
U.S. EPA Waste Number:	D001

14. **TRANSPORTATION (These are guidelines, in all cases refer to 49 CFR for proper classification)**

U.S. DOT: 49 CFR 172.101 Hazardous Materials Table

	Non-Aerosol	Aerosol
Proper shipping name:	Flammable Liquid, n.o.s. (Isopropanol, acetone)	Consumer commodity
Hazard class or division:	3	ORM-D
Identification No.:	UN1993	None
Packing Group:	II	None

IATA: List of Dangerous Goods	Non-aerosol	Aerosol
Proper shipping name:	Flammable liquid, n.o.s. (Isopropanol, Acetone)	Aerosols, flammable
Hazard class or division:	3	2.1
Identification No.:	UN1993	UN1950
Packing Group:	II	-

IMDG: General Index	Non-aerosol	Aerosol
Proper shipping name:	FLAMMABLE LIQUID, N.O.S. (ISOPROPANOL, ACETONE)	AEROSOLS
Hazard class or division:	3.2	2.1
Identification No.:	UN1993	UN1950
Packing Group:	II	-

15. **REGULATORY INFORMATION**

TSCA:	All ingredients are listed in TSCA inventory.
CERCLA:	Reportable quantity (RQ) for Acetone = 5000 lbs.
SARA TITLE III, Section 313:	Acetone.
California Proposition 65:	This product contains trace amount of chemicals known to the State of California to cause cancer and to cause birth defects or other reproductive harm.
WHMIS Class (Canada):	Non-Aerosol: B-2, D-2B - Aerosol: A, B-5, D-2B

Note: This MSDS has been prepared to meet WHMIS (Canada) requirements with the exception of using 16 headings.

16. **OTHER INFORMATION**

Revision Statement:	Review
Supersedes:	October 26, 2004
Prepared by:	Tamie Simmons, R&D Manager

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Safety Data Sheet

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Document Group:	16-5506-7	**Version Number:**	9.00
Issue Date:	01/30/15	**Supercedes Date:**	09/12/11

SECTION 1: Identification

1.1. Product identifier
3M™ Professional Grade Rubberized Undercoating 3584 3584

Product Identification Numbers
60-4550-3261-9, 60-4550-5619-6, 70-0709-9193-3, 70-0709-9291-5, 70-0709-9292-3, 70-0709-9344-2, 70-0709-9345-9, 70-0709-9406-9, 70-0709-9707-0, 70-0711-5896-1, 70-0711-5950-6, 70-0711-5951-4

1.2. Recommended use and restrictions on use

Recommended use
Automotive, Rubberized undercoating for cars

1.3. Supplier's details

MANUFACTURER:	3M
DIVISION:	Automotive Aftermarket
ADDRESS:	3M Center, St. Paul, MN 55144-1000, USA
Telephone:	1-888-3M HELPS (1-888-364-3577)

1.4. Emergency telephone number
1-800-364-3577 or (651) 737-6501 (24 hours)

SECTION 2: Hazard identification

The label elements below were prepared in accordance with OSHA Hazard Communication Standard, 29 CFR 1910.1200. This information may be different from the actual product label information for labels regulated by other agencies.

2.1. Hazard classification
Flammable Aerosol: Category 1.
Serious Eye Damage/Irritation: Category 2B.
Skin Corrosion/Irritation: Category 2.
Reproductive Toxicity: Category 1B.
Carcinogenicity: Category 1A.
Specific Target Organ Toxicity (single exposure): Category 1.
Specific Target Organ Toxicity (central nervous system): Category 3.
Specific Target Organ Toxicity (repeated exposure): Category 1.

2.2. Label elements
Signal word

Danger

Symbols
Flame | Exclamation mark | Health Hazard |

Pictograms

Hazard Statements
Extremely flammable aerosol.

Causes eye irritation.
Causes skin irritation.
May cause drowsiness or dizziness.
May damage fertility or the unborn child.
May cause cancer.

Causes damage to organs:
cardiovascular system |

Causes damage to organs through prolonged or repeated exposure:
nervous system |
sensory organs |

Precautionary Statements
General:
Keep out of reach of children.

Prevention:
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
Do not spray on an open flame or other ignition source.
Pressurized container: Do not pierce or burn, even after use.
Do not breathe dust/fume/gas/mist/vapors/spray.
Use only outdoors or in a well-ventilated area.
Wear protective gloves.
Do not eat, drink or smoke when using this product.
Wash thoroughly after handling.

Response:
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.
Continue rinsing.
IF ON SKIN: Wash with plenty of soap and water.
Take off contaminated clothing and wash it before reuse.
IF exposed: Call a POISON CENTER or doctor/physician.
Specific treatment (see Notes to Physician on this label).

Storage:
Protect from sunlight. Do not expose to temperatures exceeding 50C/122F.
Store in a well-ventilated place. Keep container tightly closed.

Store locked up.

Disposal:
Dispose of contents/container in accordance with applicable local/regional/national/international regulations.

Notes to Physician:
Exposure may increase myocardial irritability. Do not administer sympathomimetic drugs unless absolutely necessary.

2.3. Hazards not otherwise classified
None.

15% of the mixture consists of ingredients of unknown acute oral toxicity.

15% of the mixture consists of ingredients of unknown acute inhalation toxicity.

SECTION 3: Composition/information on ingredients

Ingredient	C.A.S. No.	% by Wt
Asphalt	8052-42-4	15 - 40 Trade Secret *
Calcium Carbonate	471-34-1	15 - 40 Trade Secret *
Toluene	108-88-3	10 - 30 Trade Secret *
Propane	74-98-6	7 - 13 Trade Secret *
Mineral Spirits	64742-88-7	5 - 10 Trade Secret *
Butane	106-97-8	3 - 7 Trade Secret *
Aluminum Silicate	1327-36-2	1 - 5 Trade Secret *
Methyl Alcohol	67-56-1	<= 0.5 Trade Secret *
Quartz Silica	14808-60-7	<= 0.1 Trade Secret *

*The specific chemical identity and/or exact percentage (concentration) of this composition has been withheld as a trade secret.

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation:
Remove person to fresh air. Get medical attention.

Skin Contact:
Immediately wash with soap and water. Remove contaminated clothing and wash before reuse. If signs/symptoms develop, get medical attention.

Eye Contact:
Flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. If signs/symptoms persist, get medical attention.

If Swallowed:
Rinse mouth. If you feel unwell, get medical attention.

4.2. Most important symptoms and effects, both acute and delayed
See Section 11.1. Information on toxicological effects.

4.3. Indication of any immediate medical attention and special treatment required
Exposure may increase myocardial irritability. Do not administer sympathomimetic drugs unless absolutely necessary.

SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media
Use a fire fighting agent suitable for the surrounding fire.

5.2. Special hazards arising from the substance or mixture
Closed containers exposed to heat from fire may build pressure and explode.

Hazardous Decomposition or By-Products

Substance	Condition
Hydrocarbons	During Combustion
Carbon monoxide	During Combustion
Carbon dioxide	During Combustion
Hydrogen Sulfide	During Combustion
Oxides of Sulfur	During Combustion

5.3. Special protective actions for fire-fighters
Water may not effectively extinguish fire; however, it should be used to keep fire-exposed containers and surfaces cool and prevent explosive rupture.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Evacuate area. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use only non-sparking tools. Ventilate the area with fresh air. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

6.2. Environmental precautions
Avoid release to the environment.

6.3. Methods and material for containment and cleaning up
If possible, seal leaking container. Place leaking containers in a well-ventilated area, preferably an operating exhaust hood, or if necessary outdoors on an impermeable surface until appropriate packaging for the leaking container or its contents is available. Contain spill. Cover spill area with a fire-extinguishing foam designed for use on solvents, such as alcohols and acetone, that can dissolve in water. An AR - AFFF type foam is recommended. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Remember, adding an absorbent material does not remove a physical, health, or environmental hazard. Collect as much of the spilled material as possible using non-sparking tools. Place in a metal container approved for transportation by appropriate authorities. Clean up residue with an appropriate solvent selected by a qualified and authorized person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and SDS. Seal the container. Dispose of collected material as soon as possible.

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Do not use in a confined area with minimal air exchange. Keep out of reach of children. Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Do not spray on an open flame or other ignition source. Do not pierce or burn, even after use. Do not breathe dust/fume/gas/mist/vapors/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Avoid release to the environment. Avoid contact with oxidizing agents (eg. chlorine, chromic acid etc.) Use personal protective equipment (gloves, respirators, etc.) as required. Vapors may travel long distances along the ground or floor to an ignition source and flash back.

7.2. Conditions for safe storage including any incompatibilities
Store in a well-ventilated place. Keep container tightly closed. Protect from sunlight. Do not expose to temperatures exceeding 50C/122F. Store away from heat. Store away from acids. Store away from oxidizing agents.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits
If a component is disclosed in section 3 but does not appear in the table below, an occupational exposure limit is not available for the component.

Ingredient	C.A.S. No.	Agency	Limit type	Additional Comments
Butane	106-97-8	ACGIH	STEL:1000 ppm	
Natural gas	106-97-8	ACGIH	Limit value not established:	
Toluene	108-88-3	ACGIH	TWA:20 ppm	A4: Not class. as human carcin
Toluene	108-88-3	OSHA	TWA:200 ppm;CEIL:300 ppm	
Toluene	108-88-3	CMRG	STEL:75 ppm	Skin Notation
Quartz Silica	14808-60-7	ACGIH	TWA(respirable fraction):0.025 mg/m3	A2: Suspected human carcin.
Quartz Silica	14808-60-7	OSHA	TWA concentration(as total dust):0.3 mg/m3;TWA concentration(respirable):0.1 mg/m3(2.4 millions of particles/cu. ft.)	
Calcium Carbonate	471-34-1	CMRG	TWA:10 mg/m3;STEL:20 mg/m3	
Mineral Spirits	64742-88-7	CMRG	TWA:100 ppm	
Methyl Alcohol	67-56-1	ACGIH	TWA:200 ppm;STEL:250 ppm	Skin Notation
Methyl Alcohol	67-56-1	OSHA	TWA:260 mg/m3(200 ppm)	
Propane	74-98-6	ACGIH	Limit value not established:	
Propane	74-98-6	OSHA	TWA:1800 mg/m3(1000 ppm)	
Asphalt	8052-42-4	ACGIH	TWA(as benzene solubles, inhalable fraction):0.5 mg/m3	A4: Not class. as human carcin

ACGIH : American Conference of Governmental Industrial Hygienists
AIHA : American Industrial Hygiene Association
CMRG : Chemical Manufacturer's Recommended Guidelines
OSHA : United States Department of Labor - Occupational Safety and Health Administration
TWA: Time-Weighted-Average
STEL: Short Term Exposure Limit
CEIL: Ceiling

8.2. Exposure controls

8.2.1. Engineering controls
Do not remain in area where available oxygen may be reduced. Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below relevant Exposure Limits and/or control dust/fume/gas/mist/vapors/spray. If ventilation is not adequate, use respiratory protection equipment.

8.2.2. Personal protective equipment (PPE)

Eye/face protection

Select and use eye/face protection to prevent contact based on the results of an exposure assessment. The following eye/face protection(s) are recommended:

Indirect Vented Goggles

Skin/hand protection
Select and use gloves and/or protective clothing approved to relevant local standards to prevent skin contact based on the results of an exposure assessment. Selection should be based on use factors such as exposure levels, concentration of the substance or mixture, frequency and duration, physical challenges such as temperature extremes, and other use conditions. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible gloves/protective clothing.
Gloves made from the following material(s) are recommended: Fluoroelastomer

Respiratory protection

An exposure assessment may be needed to decide if a respirator is required. If a respirator is needed, use respirators as part of a full respiratory protection program. Based on the results of the exposure assessment, select from the following respirator type(s) to reduce inhalation exposure:
Half facepiece or full facepiece supplied-air respirator

For questions about suitability for a specific application, consult with your respirator manufacturer.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

General Physical Form:	Liquid
Specific Physical Form:	Aerosol
Odor, Color, Grade:	Thick black solution with a solvent odor.
Odor threshold	*No Data Available*
pH	*No Data Available*
Melting point	*No Data Available*
Boiling Point	*No Data Available*
Flash Point	<=0 °F [*Test Method:* Closed Cup]
Evaporation rate	>=1 [*Ref Std:* ETHER=1]
Flammability (solid, gas)	Not Applicable
Flammable Limits(LEL)	1.6 %
Flammable Limits(UEL)	6.5 %
Vapor Pressure	*No Data Available*
Vapor Density	>=1 [*Ref Std:* AIR=1]
Density	1.1 g/ml
Specific Gravity	1.1 [*Ref Std:* WATER=1]
Solubility In Water	*Not Applicable*
Solubility- non-water	*No Data Available*
Partition coefficient: n-octanol/ water	*No Data Available*
Autoignition temperature	>=470 °F [*Test Method:* Estimated]
Decomposition temperature	*No Data Available*
Viscosity	*No Data Available*
Hazardous Air Pollutants	0.287 lb HAPS/lb solids [*Test Method:* Calculated]
Volatile Organic Compounds	40.0 % weight [*Test Method:* calculated per CARB title 2]
Volatile Organic Compounds	440 g/l [*Test Method:* calculated SCAQMD rule 443.1]
Percent volatile	40.0 % weight
VOC Less H2O & Exempt Solvents	440 g/l [*Test Method:* calculated SCAQMD rule 443.1]

SECTION 10: Stability and reactivity

10.1. Reactivity
This material may be reactive with certain agents under certain conditions - see the remaining headings in this section.

10.2. Chemical stability
Stable.

10.3. Possibility of hazardous reactions
Hazardous polymerization will not occur.

10.4. Conditions to avoid
Heat
Sparks and/or flames

10.5. Incompatible materials
Strong acids
Strong oxidizing agents

10.6. Hazardous decomposition products

Substance	Condition
None known.	

Refer to section 5.2 for hazardous decomposition products during combustion.

SECTION 11: Toxicological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. In addition, toxicological data on ingredients may not be reflected in the material classification and/or the signs and symptoms of exposure, because an ingredient may be present below the threshold for labeling, an ingredient may not be available for exposure, or the data may not be relevant to the material as a whole.

11.1. Information on Toxicological effects

Signs and Symptoms of Exposure

Based on test data and/or information on the components, this material may produce the following health effects:

Inhalation:
Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

May cause additional health effects (see below).

Skin Contact:
Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, dryness, cracking, blistering, and pain.

Eye Contact:
Moderate Eye Irritation: Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

Mechanical eye irritation: Signs/symptoms may include pain, redness, tearing and corneal abrasion.

Ingestion:
Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

May cause additional health effects (see below).

Additional Health Effects:

Single exposure may cause target organ effects:
Central Nervous System (CNS) Depression: Signs/symptoms may include headache, dizziness, drowsiness, incoordination, nausea, slowed reaction time, slurred speech, giddiness, and unconsciousness.

Cardiac Sensitization: Signs/symptoms may include irregular heartbeat (arrhythmia), faintness, chest pain, and may be fatal.

Prolonged or repeated exposure may cause target organ effects:
Ocular Effects: Signs/symptoms may include blurred or significantly impaired vision.

Auditory Effects: Signs/symptoms may include hearing impairment, balance dysfunction and ringing in the ears.

Olfactory Effects: Signs/symptoms may include decreased ability to detect odors and/or complete loss of smell.

Neurological Effects: Signs/symptoms may include personality changes, lack of coordination, sensory loss, tingling or numbness of the extremities, weakness, tremors, and/or changes in blood pressure and heart rate.

Reproductive/Developmental Toxicity:
Contains a chemical or chemicals which can cause birth defects or other reproductive harm.

Carcinogenicity:
Contains a chemical or chemicals which can cause cancer.

Ingredient	CAS No.	Class Description	Regulation
SILICA, CRYS AIRRESP	14808-60-7	Known human carcinogen	National Toxicology Program Carcinogens
Asphalt	8052-42-4	Grp. 2B: Possible human carc	International Agency for Research on Cancer
Quartz Silica	14808-60-7	Grp. 1: Carcinogenic to humans	International Agency for Research on Cancer

Toxicological Data
If a component is disclosed in section 3 but does not appear in a table below, either no data are available for that endpoint or the data are not sufficient for classification.

Acute Toxicity

Name	Route	Species	Value
Overall product	Inhalation-Vapor(4 hr)		No data available; calculated ATE > 50 mg/l
Overall product	Ingestion		No data available; calculated ATE > 5,000 mg/kg
Asphalt	Dermal	Rabbit	LD50 > 2,000 mg/kg
Asphalt	Ingestion	Rat	LD50 > 5,000 mg/kg
Calcium Carbonate	Dermal	Rat	LD50 > 2,000 mg/kg
Calcium Carbonate	Inhalation-Dust/Mist (4 hours)	Rat	LC50 3.0 mg/l
Calcium Carbonate	Ingestion	Rat	LD50 6,450 mg/kg
Toluene	Dermal	Rat	LD50 12,000 mg/kg
Toluene	Inhalation-Vapor (4 hours)	Rat	LC50 30 mg/l
Toluene	Ingestion	Rat	LD50 5,550 mg/kg
Propane	Inhalation-Gas (4 hours)	Rat	LC50 > 200,000 ppm
Mineral Spirits	Inhalation-Vapor		LC50 estimated to be 20 - 50 mg/l
Mineral Spirits	Dermal	Rabbit	LD50 > 3,000 mg/kg
Mineral Spirits	Ingestion	Rat	LD50 > 5,000 mg/kg
Butane	Inhalation-Gas (4 hours)	Rat	LC50 277,000 ppm
Aluminum Silicate	Dermal		LD50 estimated to be > 5,000 mg/kg

Aluminum Silicate	Ingestion		LD50 estimated to be > 5,000 mg/kg
Methyl Alcohol	Dermal		LD50 estimated to be 1,000 - 2,000 mg/kg
Methyl Alcohol	Inhalation-Vapor		LC50 estimated to be 10 - 20 mg/l
Methyl Alcohol	Ingestion		LD50 estimated to be 50 - 300 mg/kg
Quartz Silica	Dermal		LD50 estimated to be > 5,000 mg/kg
Quartz Silica	Ingestion		LD50 estimated to be > 5,000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Asphalt	Human	Minimal irritation
Calcium Carbonate	Rabbit	No significant irritation
Toluene	Rabbit	Irritant
Propane	Rabbit	Minimal irritation
Mineral Spirits	Rabbit	Irritant
Butane	Professional judgement	No significant irritation
Methyl Alcohol	Rabbit	Mild irritant
Quartz Silica	Professional judgement	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
Asphalt	Human	Mild irritant
Calcium Carbonate	Rabbit	No significant irritation
Toluene	Rabbit	Moderate irritant
Propane	Rabbit	Mild irritant
Mineral Spirits	Rabbit	No significant irritation
Butane	Rabbit	No significant irritation
Methyl Alcohol	Rabbit	Moderate irritant

Skin Sensitization

Name	Species	Value
Toluene	Guinea pig	Not sensitizing
Mineral Spirits	Guinea pig	Not sensitizing
Methyl Alcohol	Guinea pig	Not sensitizing

Photosensitization

Name	Species	Value
Asphalt	Human	Some positive data exist, but the data are not sufficient for classification

Respiratory Sensitization

For the component/components, either no data are currently available or the data are not sufficient for classification.

Germ Cell Mutagenicity

Name	Route	Value
Asphalt	In vivo	Not mutagenic
Asphalt	In Vitro	Some positive data exist, but the data are not sufficient for classification
Toluene	In Vitro	Not mutagenic
Toluene	In vivo	Not mutagenic

Propane	In Vitro	Not mutagenic
Mineral Spirits	In vivo	Not mutagenic
Mineral Spirits	In Vitro	Some positive data exist, but the data are not sufficient for classification
Butane	In Vitro	Not mutagenic
Methyl Alcohol	In Vitro	Some positive data exist, but the data are not sufficient for classification
Methyl Alcohol	In vivo	Some positive data exist, but the data are not sufficient for classification
Quartz Silica	In Vitro	Some positive data exist, but the data are not sufficient for classification
Quartz Silica	In vivo	Some positive data exist, but the data are not sufficient for classification

Carcinogenicity

Name	Route	Species	Value
Asphalt	Not Specified	Human and animal	Some positive data exist, but the data are not sufficient for classification
Toluene	Dermal	Mouse	Some positive data exist, but the data are not sufficient for classification
Toluene	Ingestion	Rat	Some positive data exist, but the data are not sufficient for classification
Toluene	Inhalation	Mouse	Some positive data exist, but the data are not sufficient for classification
Mineral Spirits	Dermal	Mouse	Some positive data exist, but the data are not sufficient for classification
Mineral Spirits	Inhalation	Human and animal	Some positive data exist, but the data are not sufficient for classification
Methyl Alcohol	Inhalation	Multiple animal species	Not carcinogenic
Quartz Silica	Inhalation	Human and animal	Carcinogenic

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test Result	Exposure Duration
Calcium Carbonate	Ingestion	Not toxic to development	Rat	NOAEL 625 mg/kg/day	premating & during gestation
Toluene	Inhalation	Some positive female reproductive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	occupational exposure
Toluene	Inhalation	Some positive male reproductive data exist, but the data are not sufficient for classification	Rat	NOAEL 2.3 mg/l	1 generation
Toluene	Ingestion	Toxic to development	Rat	LOAEL 520 mg/kg/day	during gestation
Toluene	Inhalation	Toxic to development	Human	NOAEL Not available	poisoning and/or abuse
Mineral Spirits	Inhalation	Not toxic to development	Rat	NOAEL 2.4 mg/l	during organogenesis
Methyl Alcohol	Ingestion	Some positive male reproductive data exist, but the data are not sufficient for classification	Rat	NOAEL 1,600 mg/kg/day	21 days
Methyl Alcohol	Ingestion	Toxic to development	Mouse	LOAEL 4,000 mg/kg/day	during organogenesis
Methyl Alcohol	Inhalation	Toxic to development	Mouse	NOAEL 1.3 mg/l	during organogenesi

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Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Calcium Carbonate	Inhalation	respiratory system	All data are negative	Rat	NOAEL 0.812 mg/l	90 minutes
Toluene	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	
Toluene	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	
Toluene	Inhalation	immune system	Some positive data exist, but the data are not sufficient for classification	Mouse	NOAEL 0.004 mg/l	3 hours
Toluene	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	poisoning and/or abuse
Propane	Inhalation	cardiac sensitization	Causes damage to organs	Human	NOAEL Not available	
Propane	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	
Propane	Inhalation	respiratory irritation	All data are negative	Human	NOAEL Not available	
Mineral Spirits	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human and animal	NOAEL Not available	
Mineral Spirits	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification		NOAEL Not available	
Mineral Spirits	Inhalation	nervous system	Some positive data exist, but the data are not sufficient for classification	Dog	NOAEL 6.5 mg/l	4 hours
Butane	Inhalation	cardiac sensitization	Causes damage to organs	Human	NOAEL Not available	
Butane	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human and animal	NOAEL Not available	
Butane	Inhalation	heart	Some positive data exist, but the data are not sufficient for classification	Dog	NOAEL 5,000 ppm	25 minutes
Butane	Inhalation	respiratory irritation	All data are negative	Rabbit	NOAEL Not available	
Methyl Alcohol	Inhalation	blindness	Causes damage to organs	Human	NOAEL Not available	occupational exposure
Methyl Alcohol	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	not available
Methyl Alcohol	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL Not available	6 hours
Methyl Alcohol	Ingestion	blindness	Causes damage to organs	Human	NOAEL Not available	poisoning and/or abuse
Methyl Alcohol	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	poisoning and/or abuse

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Asphalt	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	occupational exposure
Calcium Carbonate	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	occupational exposure
Toluene	Inhalation	auditory system | nervous system |	Causes damage to organs through prolonged or repeated	Human	NOAEL Not available	poisoning and/or abuse

		eyes | olfactory system	exposure			
Toluene	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 2 3 mg/l	15 months
Toluene	Inhalation	heart | liver | kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 11 3 mg/l	15 weeks
Toluene	Inhalation	endocrine system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 1 1 mg/l	4 weeks
Toluene	Inhalation	immune system	Some positive data exist, but the data are not sufficient for classification	Mouse	NOAEL Not available	20 days
Toluene	Inhalation	bone, teeth, nails, and/or hair	Some positive data exist, but the data are not sufficient for classification	Mouse	NOAEL 1 1 mg/l	8 weeks
Toluene	Inhalation	hematopoietic system | vascular system	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	occupational exposure
Toluene	Ingestion	nervous system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 625 mg/kg/day	13 weeks
Toluene	Ingestion	heart	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 2,500 mg/kg/day	13 weeks
Toluene	Ingestion	liver | kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Multiple animal species	NOAEL 2,500 mg/kg/day	13 weeks
Toluene	Ingestion	hematopoietic system	Some positive data exist, but the data are not sufficient for classification	Mouse	NOAEL 600 mg/kg/day	14 days
Toluene	Ingestion	endocrine system	Some positive data exist, but the data are not sufficient for classification	Mouse	NOAEL 105 mg/kg/day	28 days
Toluene	Ingestion	immune system	Some positive data exist, but the data are not sufficient for classification	Mouse	NOAEL 105 mg/kg/day	4 weeks
Mineral Spirits	Inhalation	nervous system	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 4 6 mg/l	6 months
Mineral Spirits	Inhalation	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 1 9 mg/l	13 weeks
Mineral Spirits	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Multiple animal species	NOAEL 0 6 mg/l	90 days
Mineral Spirits	Inhalation	bone, teeth, nails, and/or hair | blood | liver | muscles	All data are negative	Rat	NOAEL 5 6 mg/l	12 weeks
Mineral Spirits	Inhalation	heart	All data are negative	Multiple animal species	NOAEL 1 3 mg/l	90 days
Butane	Inhalation	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 4,489 ppm	90 days
Butane	Inhalation	blood	All data are negative	Rat	NOAEL 4,489 ppm	90 days
Methyl Alcohol	Inhalation	liver	All data are negative	Rat	NOAEL 6 55 mg/l	4 weeks
Methyl Alcohol	Inhalation	respiratory system	All data are negative	Rat	NOAEL 13 1 mg/l	6 weeks
Methyl Alcohol	Ingestion	liver | nervous system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 2,500 mg/kg/day	90 days
Quartz Silica	Inhalation	silicosis	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	occupational exposure

Aspiration Hazard

Name	Value
Toluene	Aspiration hazard
Mineral Spirits	Aspiration hazard

Please contact the address or phone number listed on the first page of the SDS for additional toxicological information on this material and/or its components.

SECTION 12: Ecological information

Ecotoxicological information

Please contact the address or phone number listed on the first page of the SDS for additional ecotoxicological information on this material and/or its components.

Chemical fate information

Please contact the address or phone number listed on the first page of the SDS for additional chemical fate information on this material and/or its components.

SECTION 13: Disposal considerations

13.1. Disposal methods
Dispose of contents/ container in accordance with the local/regional/national/international regulations.

Incinerate in a permitted waste incineration facility. Facility must be capable of handling aerosol cans. As a disposal alternative, utilize an acceptable permitted waste disposal facility. Empty drums/barrels/containers used for transporting and handling hazardous chemicals (chemical substances/mixtures/preparations classified as Hazardous as per applicable regulations) shall be considered, stored, treated & disposed of as hazardous wastes unless otherwise defined by applicable waste regulations. Consult with the respective regulating authorities to determine the available treatment and disposal facilities.

SECTION 14: Transport Information

For Transport Information, please visit http://3M.com/Transportinfo or call 1-800-364-3577 or 651-737-6501.

SECTION 15: Regulatory information

15.1. US Federal Regulations
Contact 3M for more information.

311/312 Hazard Categories:

Fire Hazard - Yes Pressure Hazard - Yes Reactivity Hazard - No Immediate Hazard - Yes Delayed Hazard - Yes

Section 313 Toxic Chemicals subject to the reporting requirements of that section and 40 CFR part 372 (EPCRA):

Ingredient	C.A.S. No	% by Wt
Toluene	108-88-3	10 - 30

15.2. State Regulations
Contact 3M for more information.

California Proposition 65

Ingredient	C.A.S. No.	Classification
BITUMENS, EXTRACTS OF STEAM-REFINED AND AIR-REFINED	None	Carcinogen
SILICA, CRYSTALLINE (AIRBORNE PARTICLES OF RESPIRABLE SIZE)	None	Carcinogen
Toluene	108-88-3	Female reproductive toxin
Toluene	108-88-3	Developmental Toxin
Methyl Alcohol	67-56-1	Developmental Toxin

WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.
WARNING: This product contains a chemical known to the State of California to cause cancer.

15.3. Chemical Inventories
The components of this product are in compliance with the chemical notification requirements of TSCA.

Contact 3M for more information.

15.4. International Regulations
Contact 3M for more information.

This SDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SECTION 16: Other information

NFPA Hazard Classification
Health: 2 **Flammability:** 4 **Instability:** 0 **Special Hazards:** None
Aerosol Storage Code: 3

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

HMIS Hazard Classification
Health: *2 **Flammability:** 4 **Physical Hazard:** 0 **Personal Protection:** X - See PPE section.

Hazardous Material Identification System (HMIS® III) hazard ratings are designed to inform employees of chemical hazards in the workplace. These ratings are based on the inherent properties of the material under expected conditions of normal use and are not intended for use in emergency situations. HMIS® III ratings are to be used with a fully implemented HMIS® III program. HMIS® is a registered mark of the American Coatings Association (ACA).

Document Group:	16-5506-7	**Version Number:**	9.00
Issue Date:	01/30/15	**Supercedes Date:**	09/12/11

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MATERIAL SAFETY DATA SHEET

SECTION:I - MATERIAL IDENTIFICATION AND USE

MATERIAL NAME : APCOSHIELD Ex 400, Ex 405SG, Ex 410SG, Ex 420SG, Ex 440S, Ex 440T, Ex 430M, Ex 470, EPM, EPT, EPG, EPM(S), EPZ

MANUFACTURER'S NAME: ASIAN PAINTS INDUSTRIAL COATINGS LIMITED	**SUPPLIER'S NAME:** ASIAN PAINTS INDUSTRIAL COATINGS LIMITED
Street Address : 6A, SHANTINAGAR, SANTACRUZ (E)	**Street Address :** 6A, SHANTINAGAR, SANTACRUZ (E)
City : MUMBAI **State :** MAHARASHTRA	**City :** MUMBAI **State :** MAHARASHTRA
Postal code: 400 055 **Emergency Tel No.:** 91 22 56958000	**Postal code:** 400 055 **Emergency Tel No.:** 91 22 56958000
Commercial Name: Apcoshield ex 400 series Hawcoplast EP series	Chemical Name: Epoxy
Trade Name and Synonyms: -	Product Use: PAINTING

SECTION:II – HAZARDOUS INGREDIENTS OF THE MATERIAL

Hazardous Ingredients	Approx. %	CAS No. U N No.	L D 50 Specify species and route)	L C 50 Specify species and route)
1.BARIUM SULPHATE	10 - 20	7727-43-7	<15000 mg/kg	
2.FILM FORMERS, RESINS, ADDITIVES	50 – 60	NOT ESTABLISHED		
3.TITANIUM DIOXIDE	0 – 20	13463-67-7	> 24000 mg/Kg	

SECTION:III – PHYSICAL DATA FOR THE MATERIAL

Physical state: SOLID	Odour and Appearance: NOT APPLICABLE	Odour Threshold(ppm): NOT APPLICABLE	Specific Gravity: 1.2 – 1.7

Vapour Pressure (mm): NOT APPLICABLE	Vapour Density (Air=1): NOT APPLICABLE	Evaporation rate: NOT APPLICABLE	Boiling Point(°C): NOT APPLICABLE	Freezing (°C): NOT APPLICABLE

Solubility in Water: INSOLUBLE	pH : NOT APPLICABLE	Density: (gm / ml) 0.8 – 1.1	Co-efficient of Water / Oil distribution: NOT APPLICABLE

SECTION:IV - FIRE AND EXPLOSION HAZARD OF MATERIAL

Flammability : Yes/No. If yes, under what conditions:

Yes. 1. IN PRESENCE OF OPEN FLAME, SPARK OR OTHER IGNITION SOURCE
2. UNDER VERY HIGH TEMPERATURES

Means of Extinction : 1. CARBON DIOXIDE 2. FOAM EXTINGUISHER

Flash point (°C) NOT APPLICABLE	Upper Explosive Limits (% by volume) 2-3 KG/CUBIC METER	Upper Explosive Limits (% by volume) 30 MG/CUBIC METER
Auto-ignition (°C)Temperature: NOT AVAILABLE	TDG Flammability Classification: NOT AVAILABLE	Hazardous Combustion Products: NOT AVAILABLE
Explosion data: (Sensitivity to Chemical Impact) NOT APPLICABLE	Sensitivity to Static Discharge: RECOMMENDED TO SUITABLY GROUND CONTACT METAL PARTS	

SECTION:V – REACTIVITY DATA

Chemical Stability: Yes/No (If no, under what conditions)	YES
Incompatibility with Other Substances: Yes/No	AMINES, BASES, ACIDS, MERCAPTANS
Reactivity and under what conditions:	NON-REACTIVE UNDER AMBIENT CONDITIONS
Hazardous Decomposition Products:	INCOMPLETE COMBUSTION CAN YIELD CARBONMONOXIDE AND DIOXIDE, ACIDS AND ALDEHYDES
Material Name/Identifier:	NOT AVAILABLE

SECTION:VI – TOXICOLOGICAL PROPERTIES OF MATERIAL

Route of entry Skin Contact: NON HAZARDOUS	Skin Absorption: NOT APPLICABLE	Eye Contact: IRRITATION
Inhalation Acute: NOT AVAILABLE	Inhalation Chronic: NOT AVAILABLE	Ingestion: NOT AVAILABLE
Effects of Acute Exposure:	NOT AVAILABLE	

Effects of Chronic exposure to material: NOT AVAILABLE

NOT AVAILABLE NOT AVAILABLE
Exposure Limits Irritancy of Material

Sensitization to Material: NOT AVAILABLE	Carcinogenicity,Reproductive Effects, Teratogenicity,Mutagenicity: NOT AVAILABLE
Synergistic to Material:	NOT APPLICABLE

SECTION:VII – PREVENTIVE MEASURES

PERSONAL PROTECTIVE EQUIPMENT

Gloves: PLASTIC	Respiratory: FACE MASK	Eyes: PROTECTIVE GLASSES
Foot ware: INDUSTRIAL CONDUCTIVE SHOES	Clothing: NORMAL COTTON CLOTHING	Other: NIL

Engineering control (e.g. Ventilation, enclosed process etc.)@please specify)
ADEQUATE VENTILATION, DUST CONTROL DURING USE RECOMMENDED

Leak and Spill Procedure : COLLECT INTO TRAY OR VACCUM CLEAN

Waste Disposal : INCINERATE OR BURY IN NOTIFIED AREA

Handling Procedures } NORMAL
and Equipment }

Storage Requiements : AT AMBIENT IN A SHADED AND VENTILATED LOCATION AND AWAY FROM SOURCE OF IGNITION OR FIRE.

Special Shipping Inforamtion: NIL

SECTION:VIII – FIRST AID AND MEASURES

First Aid Measures
EYE CONTACT : Flush with plenty of water for at least 15 Mints and seek medical attention.
SKIN CONTACT : Wash with water + soap .

INGESTION : Seek medical attention.

INHALATION : Seek medical attention

Sources used : MATERIAL SAFETY DATA SHEETS – ICMA BOMBAY

Additional Information : NUISANCE DUST MAY CAUSE CELLULAR RESPONSE IN LUNGS

SECTION:IX - DATE OF PREPARATION OF MATERIAL SAFETY DATA SHEET

Prepared By : TECHNICAL FUNCTION POWDER COATING DEVELOPMENT GROUP
Phone No. : 5644191 Date : 21/01/2002

SECTION:X - DISCLAIMER

Information contained in this material safety data sheet is believed to be reliable and given in good faith, but no representation, guarantee or warranties of any kind are made as to its accuracy, suitability for a particular application or results to be obtained from them. The user of this material decides what safety measures are necessary to safely use this material, either alone or in combination with other materials. Asian Paints Industrial Coatings Limited makes no warranties expressed or implied in respect of the adequacy of this document for any particular purpose.

RELEASED BY : APPROVED BY :

TECHNICAL EXECUTIVE GENERAL MANAGER - TECHNOLOGY

ASIAN PAINTS INDUSTRIAL COATINGS LIMITED

Safety Data Sheet

RUST-OLEUM CORPORATION
* Trusted Quality Since 1921 *
www.rustoleum.com

1. Identification

Product Name:	ROHPER LSPR 6PK GLOSS BLACK	**Revision Date:**	8/13/2014
Product Identifier:	V2179838	**Supercedes Date:**	8/12/2014
Product Use/Class:	Topcoat/Aerosols		
Supplier:	Rust-Oleum Corporation 11 Hawthorn Parkway Vernon Hills, IL 60061 USA	**Manufacturer:**	Rust-Oleum Corporation 11 Hawthorn Parkway Vernon Hills, IL 60061 USA
Preparer:	Regulatory Department		
Emergency Telephone:	24 Hour Hotline: 847-367-7700		

2. Hazard Identification

EMERGENCY OVERVIEW: Harmful if inhaled. Harmful if swallowed. Causes eye irritation. Extremely flammable liquid and vapor. Vapors may cause flash fire or explosion. Use ventilation necessary to keep exposures below recommended exposure limits, if any. Harmful if inhaled. May affect the brain or nervous system causing dizziness, headache or nausea. Vapor Harmful. Causes Eye, Skin, Nose, and Throat Irritation. Contents Under Pressure. May cause eye, skin, or respiratory tract irritation. KEEP OUT OF REACH OF CHILDREN.

Classification

Symbol(s) of Product

Signal Word
Danger

GHS HAZARD STATEMENTS

Flammable Aerosol, category 1	H222	Extremely flammable aerosol.
Flammable Liquid, category 1	H224	Extremely flammable liquid and vapour.
Flammable Aerosol, category 1	H280	Contains gas under pressure; may explode if heated
Acute Toxicity, Oral, category 5	H303	May be harmful if swallowed.
Aspiration Hazard, category 2	H305	May be harmful if swallowed and enters airways.
Acute Toxicity, Dermal, category 5	H313	May be harmful in contact with skin.
Skin Irritation, category 2	H315	Causes skin irritation.
Eye Irritation, category 2	H319	Causes serious eye irritation.
Eye Irritation, category 2B	H320	Causes eye irritation.
Acute Toxicity, Inhalation, category 4	H332	Harmful if inhaled.
STOT, single exposure, category 3, RTI	H335	May cause respiratory irritation.
STOT, single exposure, category 3, NE	H336	May cause drowsiness or dizziness.

GHS PRECAUTIONARY STATEMENTS

P102	Keep out of reach of children.
P103	Read label before use.

P202	Do not handle until all safety precautions have been read and understood.
P210	Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P211	Do not spray on an open flame or other ignition source.
P220	Keep/Store away from clothing/.../combustible materials.
P234	Keep only in original container.
P235	Keep cool.
P240	Ground/bond container and receiving equipment.
P241	Use explosion-proof electrical/ventilating/lighting/.../ equipment.
P242	Use only non-sparking tools.
P243	Take precautionary measures against static discharge.
P251	Pressurized container: Do not pierce or burn, even after use.
P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P262	Do not get in eyes, on skin, or on clothing.
P264	Wash ... thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P281	Use personal protective equipment as required.
P285	In case of inadequate ventilation wear respiratory protection.
P302+P350	IF ON SKIN: Gently wash with plenty of soap and water.
P303+P361+P353	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312	Call a POISON CENTER or doctor/physician if you feel unwell.
P321	Specific treatment (see ... on this label).
P332+P313	If skin irritation occurs: Get medical advice/attention.
P337+P313	If eye irritation persists: Get medical advice/attention.
P351	Rinse cautiously with water for several minutes.
P352	Wash with plenty of soap and water.
P362	Take off contaminated clothing and wash before reuse.
P370+P378	In case of fire: Use ... for extinction.
P374	Fight fire with normal precautions from a reasonable distance.
P375	Fight fire remotely due to the risk of explosion.
P402	Store in a dry place.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P403+P235	Store in a well-ventilated place. Keep cool.
P405	Store locked up.
P410+P412	Protect from sunlight. Do no expose to temperatures exceeding 50°C/ 122°F.
P501	Dispose of contents/container to ...

3. Composition/Information On Ingredients

HAZARDOUS SUBSTANCES

Chemical Name	CAS-No.	Wt.% Range	GHS Symbols	GHS Statements
Liquefied Petroleum Gas	68476-86-8	25-50		
Acetone	67-64-1	10-25	GHS02	H225
n-Butyl Acetate	123-86-4	10-25	GHS02	H225
Xylene	1330-20-7	2.5-10	GHS02	H226
Barium Sulfate	7727-43-7	2.5-10		
Propylene Glycol Monobutyl Ether	5131-66-8	2.5-10	GHS02-GHS07	H226-302
Ethylbenzene	100-41-4	1.0-2.5	GHS02-GHS07	H225-332
Carbon Black	1333-86-4	1.0-2.5	GHS02	H251

The text for GHS Hazard Statements shown above (if any) is given in the "16. Other Information" section.

4. First-aid Measures

FIRST AID - EYE CONTACT: Immediately flush eyes with plenty of water for at least 15 minutes holding eyelids open. Get medical attention. Do NOT allow rubbing of eyes or keeping eyes closed.

FIRST AID - SKIN CONTACT: Wash skin with soap and water. Remove contaminated clothing. Get medical attention if irritation develops or persists.

FIRST AID - INHALATION: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get immediate medical attention. Do NOT use mouth-to-mouth resuscitation. If you experience difficulty in breathing, leave the area to obtain fresh air. If continued difficulty is experienced, get medical assistance immediately.

FIRST AID - INGESTION: Aspiration hazard: Do not induce vomiting or give anything by mouth because this material can enter the lungs and cause severe lung damage. Get immediate medical attention. If swallowed, get medical attention.

5. Fire-fighting Measures

EXTINGUISHING MEDIA: Alcohol Film Forming Foam, Carbon Dioxide, Dry Chemical, Water Fog

UNUSUAL FIRE AND EXPLOSION HAZARDS: FLASH POINT IS LESS THAN 20 °. F. - EXTREMELY FLAMMABLE LIQUID AND VAPOR!Water spray may be ineffective. Closed containers may explode when exposed to extreme heat due to buildup of steam. Closed containers may explode when exposed to extreme heat. Vapors may form explosive mixtures with air. Vapors can travel to a source of ignition and flash back. Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame. Perforation of the pressurized container may cause bursting of the can. No unusual fire or explosion hazards noted.

SPECIAL FIREFIGHTING PROCEDURES: Water may be used to cool closed containers to prevent pressure buildup and possible autoignition or explosion. Full protective equipment including self-contained breathing apparatus should be used. Evacuate area and fight fire from a safe distance. Use water spray to keep fire-exposed containers cool. Containers may explode when heated.

6. Accidental Release Measures

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED: Contain spilled liquid with sand or earth. DO NOT use combustible materials such as sawdust. Isolate the hazard area and deny entry to unnecessary and unprotected personnel. Remove all sources of ignition, ventilate area and remove with inert absorbent and non-sparking tools. Dispose of according to local, state (provincial) and federal regulations. Do not incinerate closed containers. Ventilate area, isolate spilled material, and remove with inert absorbent. Dispose of contaminated absorbent, container, and unused contents in accordance with local, state, and federal regulations.

7. Handling and Storage

HANDLING: Wash thoroughly after handling. Wash hands before eating. Remove contaminated clothing and launder before reuse. Use only with adequate ventilation. Follow all MSDS/label precautions even after container is emptied because it may retain product residues. Avoid breathing fumes, vapors, or mist. Avoid contact with eyes, skin and clothing.

STORAGE: Store in a dry, well ventilated place. Keep container tightly closed when not in use. Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame. Contents under pressure. Do not store above 120 ° F. Store large quantities in buildings designed and protected for storage of NFPA Class I flammable liquids. Keep away from heat, sparks, flame and sources of ignition. Avoid excess heat. Product should be stored in tightly sealed containers and protected from heat, moisture, and foreign materials.

8. Exposure Controls/Personal Protection

Chemical Name	CAS-No.	Weight % Less Than	ACGIH TLV-TWA	ACGIH TLV-STEL	OSHA PEL-TWA	OSHA PEL-CEILING
Liquefied Petroleum Gas	68476-86-8	30.0	N.E.	N.E.	N.E.	N.E.
Acetone	67-64-1	25.0	500 ppm	750 ppm	1000 ppm	N.E.
n-Butyl Acetate	123-86-4	15.0	150 ppm	200 ppm	150 ppm	N.E.
Xylene	1330-20-7	10.0	100 ppm	150 ppm	100 ppm	N.E.
Barium Sulfate	7727-43-7	10.0	10 mg/m3	N.E.	15 mg/m3 [Total Dust]	N.E.
Propylene Glycol Monobutyl Ether	5131-66-8	5.0	N.E.	N.E.	N.E.	N.E.
Ethylbenzene	100-41-4	5.0	20 ppm	125 ppm	100 ppm	N.E.
Carbon Black	1333-86-4	5.0	3 mg/m3	N.E.	3.5 mg/m3	N.E.

PERSONAL PROTECTION

ENGINEERING CONTROLS: Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Use explosion-proof ventilation equipment. Provide general dilution of local exhaust ventilation in volume and pattern to keep TLV of hazardous ingredients below acceptable limits. Prevent build-up of vapors by opening all doors and windows to achieve cross-ventilation.

RESPIRATORY PROTECTION: A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. A NIOSH/MSHA approved air purifying respirator with organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits.

SKIN PROTECTION: Use gloves to prevent prolonged skin contact. Nitrile or Neoprene gloves may afford adequate skin protection.

EYE PROTECTION: Use safety eyewear designed to protect against splash of liquids.

OTHER PROTECTIVE EQUIPMENT: Refer to safety supervisor or industrial hygienist for further guidance regarding types of personal protective equipment and their applications.

HYGIENIC PRACTICES: Wash thoroughly with soap and water before eating, drinking or smoking. Remove contaminated clothing immediately and launder before reuse.

9. Physical and Chemical Properties

Appearance:	Aerosolized Mist	**Physical State:**	Liquid
Odor:	Solvent Like	**Odor Threshold:**	N.E.
Relative Density:	0.794	**pH:**	N.A.
Freeze Point, °C:	N.D.	**Viscosity:**	N.D.
Solubility in Water:	Slight	**Partition Coefficient, n-octanol/ water:**	No Information
Decompostion Temp., °C:	No Information		
Boiling Range, °C:	-34 - 999	**Explosive Limits, vol%:**	0.7 - 13.0
Flammability:	Supports Combustion	**Flash Point, °C:**	-105
Evaporation Rate:	Faster than Ether	**Auto-ignition Temp., °C:**	No Information
Vapor Density:	Heavier than Air	**Vapor Pressure:**	N.D.

(See "Other information" Section for abbreviation legend)

10. Stability and Reactivity

CONDITIONS TO AVOID: Avoid temperatures above 120 ° F. Avoid contact with strong acid and strong bases. Avoid all possible sources of ignition.

INCOMPATIBILITY: Incompatible with strong oxidizing agents, strong acids and strong alkalies.

HAZARDOUS DECOMPOSITION: By open flame, carbon monoxide and carbon dioxide. When heated to decomposition, it emits acrid smoke and irritating fumes. Contains solvents which may form carbon monoxide, carbon dioxide, and formaldehyde.

HAZARDOUS POLYMERIZATION: Will not occur under normal conditions.

STABILITY: This product is stable under normal storage conditions.

11. Toxicological information

EFFECTS OF OVEREXPOSURE - EYE CONTACT: Causes Serious Eye Irritation

EFFECTS OF OVEREXPOSURE - SKIN CONTACT: May cause skin irritation. Allergic reactions are possible.

EFFECTS OF OVEREXPOSURE - INHALATION: Harmful if inhaled. High gas, vapor, mist or dust concentrations may be harmful if inhaled. Avoid breathing fumes, spray, vapors, or mist. High vapor concentrations are irritating to the eyes, nose, throat and lungs. Prolonged or excessive inhalation may cause respiratory tract irritation.

EFFECTS OF OVEREXPOSURE - INGESTION: Harmful if swallowed.

EFFECTS OF OVEREXPOSURE - CHRONIC HAZARDS: May cause central nervous system disorder (e.g., narcosis involving a loss of coordination, weakness, fatigue, mental confusion, and blurred vision) and/or damage. High concentrations may lead to central nervous system effects (drowsiness, dizziness, nausea, headaches, paralysis, and blurred vision) and/or damage. Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Overexposure to xylene in laboratory animals has been associated with liver abnormalities, kidney, lung, spleen, eye and blood damage as well as reproductive disorders. Effects in humans, due to chronic overexposure, have included liver, cardiac abnormalities and nervous system damage. Contains carbon black. Chronic inflammation, lung fibrosis, and lung tumors have been observed in some rats experimentally exposed for long periods of time to excessive concentrations of carbon black and several insoluble fine dust particles. Tumors have not been observed in other animal species (i.e., mouse and hamster) under similar circumstances and study conditions. Epidemiological studies of North American workers show no evidence of clinically significant adverse health effects due to occupational exposure to carbon black.

Carbon black is listed as a Group 2B-"Possibly carcinogenic to humans" by IARC and is proposed to be listed as A4- "not classified as a human carcinogen" by the American Conference of Governmental Industrial Hygienists. Significant exposure is not anticipated during brush application or drying. Risk of overexposure depends on duration and level of exposure to dust from repeated sanding of surfaces or spray mist and the actual concentration of carbon black in the formula. IARC lists Ethylbenzene as a possible human carcinogen (group 2B).

PRIMARY ROUTE(S) OF ENTRY: Eye Contact, Ingestion, Inhalation, Skin Absorption, Skin Contact

ACUTE TOXICITY VALUES

The acute effects of this product have not been tested. Data on individual components are tabulated below:

CAS-No.	Chemical Name	Oral LD50	Dermal LD50	Vapor LC50
123-86-4	n-Butyl Acetate	N.I.	>17600 mg/kg Rabbit	N.I.
1330-20-7	Xylene	4300 mg/kg Rat	N.I.	47635 mg/L Rat
5131-66-8	Propylene Glycol Monobutyl Ether	1900 mg/kg Rat	N.I.	N.I.
100-41-4	Ethylbenzene	3500 mg/kg Rat	15354 mg/kg Rabbit	17.2 mg/L Rat

N.I. - No Information

12. Ecological Information

ECOLOGICAL INFORMATION: Product is a mixture of listed components.

13. Disposal Information

DISPOSAL INFORMATION: Dispose of material in accordance to local, state, and federal regulations and ordinances. Do not allow to enter waterways, wastewater, soil, storm drains or sewer systems.

14. Transport Information

	Domestic (USDOT)	International (IMDG)	Air (IATA)	TDG (Canada)
UN Number:	N.A.	1950	1950	N.A.
Proper Shipping Name:	Paint Products in Limited Quantities	Aerosols	Aerosols	Paint Products in Limited Quantities
Hazard Class:	N.A.	2.1	2.1	N.A.
Packing Group:	N.A.	N.A.	N.A.	N.A.
Limited Quantity:	Yes	Yes	Yes	Yes

15. Regulatory Information

U.S. Federal Regulations:

CERCLA - SARA Hazard Category

This product has been reviewed according to the EPA 'Hazard Categories' promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

Fire Hazard, Pressure Hazard, Acute Health Hazard, Chronic Health Hazard

Sara Section 313:

This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

Chemical Name	CAS-No.
Xylene	1330-20-7
Ethylbenzene	100-41-4

Toxic Substances Control Act:

This product contains the following chemical substances subject to the reporting requirements of TSCA 12(B) if exported from the United States:

No TSCA components exist in this product.

Inventory Information

Country	Value
USA (TSCA)	No Information
Canada (DSL)	No Information
Mexico(INSQ)	No Information
Europe (EINECS)	No Information
Japan (ENCS)	No Information
Philippines (PICCS)	No Information
China (IECSC)	No Information
Australia (AICS)	No Information
Korea (KECI)	No Information
New Zealand (NZIOC)	No Information

No Information

CALIFORNIA PROPOSITION 65:

Warning: This products contains a substance known to the State of California to cause cancer.

Chemical Name	CAS-No.
Ethylbenzene	100-41-4
Carbon Black	1333-86-4

CALIFORNIA PROPOSITION 65 REPRODUCTIVE TOXINS

Warning: This product contains a substance known to the State of California to cause birth defects or other reproductive harm.

No Proposition 65 Reproductive Toxins exist in this product.

International Regulations:

CANADIAN WHMIS:

This SDS has been prepared in compliance with Controlled Product Regulations except for the use of the 16 headings.

16. Other Information

HMIS RATINGS

Health:	2*	**Flammability:**	4	**Physical Hazard:**	0	**Personal Protection:**	X

CANADIAN WHMIS CLASS: B2 D2A

NFPA RATINGS

Health:	2	**Flammability:**	4	**Instability**	0

VOLATILE ORGANIC COMPOUNDS, g/L: 541

MSDS REVISION DATE: 8/13/2014

REASON FOR REVISION: No Information

Legend: N.A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined

Text for GHS Hazard Statements shown in Section 3 describing each ingredient:

H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H251	Self-heating: may catch fire.
H302	Harmful if swallowed.
H332	Harmful if inhaled.

Icons for GHS Pictograms shown in Section 3 describing each ingredient:

GHS02

GHS07

Rust-Oleum Corporation believes, to the best of its knowledge, information and belief, the information contained herein to be accurate and reliable as of the date of this safety data sheet. However, because the conditions of handling, use, and storage of these materials are beyond our control, we assume no responsibility or liability for personal injury or property damage incurred by the use of these materials. Rust-Oleum Corporation makes no warranty, expressed or implied, regarding the accuracy or reliability of the data or results obtained from their use. All materials may present unknown hazards and should be used with caution. The information and recommendations in this material safety data sheet are offered for the users' consideration and examination. It is the responsibility of the user to determine the final suitability of this information and to comply with all applicable international, federal, state, and local laws and regulations.

Safety Data Sheet

RUST-OLEUM CORPORATION
* Trusted Quality Since 1921 *
www.rustoleum.com

1. Identification

Product Name: ROHPER LSPR 6PK GLOSS WHITE

Product Identifier: V2192838

Product Use/Class: Topcoat/Aerosols

Supplier: Rust-Oleum Corporation
11 Hawthorn Parkway
Vernon Hills, IL 60061
USA

Manufacturer: Rust-Oleum Corporation
11 Hawthorn Parkway
Vernon Hills, IL 60061
USA

Revision Date: 8/13/2014

Supercedes Date: 8/12/2014

Preparer: Regulatory Department

Emergency Telephone: 24 Hour Hotline: 847-367-7700

2. Hazard Identification

EMERGENCY OVERVIEW: Harmful if inhaled. Harmful if swallowed. Causes eye irritation. Extremely flammable liquid and vapor. Vapors may cause flash fire or explosion. Use ventilation necessary to keep exposures below recommended exposure limits, if any. Harmful if inhaled. May affect the brain or nervous system causing dizziness, headache or nausea. Vapor Harmful. Causes Eye, Skin, Nose, and Throat Irritation. Contents Under Pressure. May cause eye, skin, or respiratory tract irritation. KEEP OUT OF REACH OF CHILDREN.

Classification

Symbol(s) of Product

Signal Word
Danger

GHS HAZARD STATEMENTS

Flammable Aerosol, category 1	H222	Extremely flammable aerosol.
Flammable Liquid, category 1	H224	Extremely flammable liquid and vapour.
Flammable Aerosol, category 1	H280	Contains gas under pressure; may explode if heated
Acute Toxicity, Oral, category 5	H303	May be harmful if swallowed.
Aspiration Hazard, category 2	H305	May be harmful if swallowed and enters airways.
Acute Toxicity, Dermal, category 5	H313	May be harmful in contact with skin.
Skin Irritation, category 2	H315	Causes skin irritation.
Eye Irritation, category 2	H319	Causes serious eye irritation.
Eye Irritation, category 2B	H320	Causes eye irritation.
Acute Toxicity, Inhalation, category 4	H332	Harmful if inhaled.
STOT, single exposure, category 3, RTI	H335	May cause respiratory irritation.
STOT, single exposure, category 3, NE	H336	May cause drowsiness or dizziness.

GHS PRECAUTIONARY STATEMENTS

P102	Keep out of reach of children.
P103	Read label before use.

P202	Do not handle until all safety precautions have been read and understood.
P210	Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P211	Do not spray on an open flame or other ignition source.
P220	Keep/Store away from clothing/.../combustible materials.
P234	Keep only in original container.
P235	Keep cool.
P240	Ground/bond container and receiving equipment.
P241	Use explosion-proof electrical/ventilating/lighting/.../ equipment.
P242	Use only non-sparking tools.
P243	Take precautionary measures against static discharge.
P251	Pressurized container: Do not pierce or burn, even after use.
P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P262	Do not get in eyes, on skin, or on clothing.
P264	Wash ... thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P281	Use personal protective equipment as required.
P285	In case of inadequate ventilation wear respiratory protection.
P302+P350	IF ON SKIN: Gently wash with plenty of soap and water.
P303+P361+P353	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312	Call a POISON CENTER or doctor/physician if you feel unwell.
P321	Specific treatment (see ... on this label).
P332+P313	If skin irritation occurs: Get medical advice/attention.
P337+P313	If eye irritation persists: Get medical advice/attention.
P351	Rinse cautiously with water for several minutes.
P352	Wash with plenty of soap and water.
P362	Take off contaminated clothing and wash before reuse.
P370+P378	In case of fire: Use ... for extinction.
P374	Fight fire with normal precautions from a reasonable distance.
P375	Fight fire remotely due to the risk of explosion.
P402	Store in a dry place.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P403+P235	Store in a well-ventilated place. Keep cool.
P405	Store locked up.
P410+P412	Protect from sunlight. Do no expose to temperatures exceeding 50°C/ 122°F.
P501	Dispose of contents/container to ...

3. Composition/Information On Ingredients

HAZARDOUS SUBSTANCES

Chemical Name	CAS-No.	Wt.% Range	GHS Symbols	GHS Statements
Liquefied Petroleum Gas	68476-86-8	10-25		
Acetone	67-64-1	10-25	GHS02	H225
Titanium Dioxide	13463-67-7	10-25		
n-Butyl Acetate	123-86-4	2.5-10	GHS02	H225
Xylene	1330-20-7	2.5-10	GHS02	H226
Ethylbenzene	100-41-4	2.5-10	GHS02-GHS07	H225-332
Propylene Glycol Monobutyl Ether	5131-66-8	1.0-2.5	GHS02-GHS07	H226-302

The text for GHS Hazard Statements shown above (if any) is given in the "16. Other Information" section.

4. First-aid Measures

FIRST AID - EYE CONTACT: Immediately flush eyes with plenty of water for at least 15 minutes holding eyelids open. Get medical attention. Do NOT allow rubbing of eyes or keeping eyes closed.

FIRST AID - SKIN CONTACT: Wash skin with soap and water. Remove contaminated clothing. Get medical attention if irritation develops or persists.

FIRST AID - INHALATION: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get immediate medical attention. Do NOT use mouth-to-mouth resuscitation. If you experience difficulty in breathing, leave the area to obtain fresh air. If continued difficulty is experienced, get medical assistance immediately.

FIRST AID - INGESTION: Aspiration hazard: Do not induce vomiting or give anything by mouth because this material can enter the lungs and cause severe lung damage. Get immediate medical attention. If swallowed, get medical attention.

5. Fire-fighting Measures

EXTINGUISHING MEDIA: Alcohol Film Forming Foam, Carbon Dioxide, Dry Chemical, Water Fog

UNUSUAL FIRE AND EXPLOSION HAZARDS: FLASH POINT IS LESS THAN 20 °. F. - EXTREMELY FLAMMABLE LIQUID AND VAPOR!Water spray may be ineffective. Closed containers may explode when exposed to extreme heat due to buildup of steam. Closed containers may explode when exposed to extreme heat. Vapors may form explosive mixtures with air. Vapors can travel to a source of ignition and flash back. Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame. Perforation of the pressurized container may cause bursting of the can. No unusual fire or explosion hazards noted.

SPECIAL FIREFIGHTING PROCEDURES: Water may be used to cool closed containers to prevent pressure buildup and possible autoignition or explosion. Full protective equipment including self-contained breathing apparatus should be used. Evacuate area and fight fire from a safe distance. Use water spray to keep fire-exposed containers cool. Containers may explode when heated.

6. Accidental Release Measures

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED: Contain spilled liquid with sand or earth. DO NOT use combustible materials such as sawdust. Isolate the hazard area and deny entry to unnecessary and unprotected personnel. Remove all sources of ignition, ventilate area and remove with inert absorbent and non-sparking tools. Dispose of according to local, state (provincial) and federal regulations. Do not incinerate closed containers. Ventilate area, isolate spilled material, and remove with inert absorbent. Dispose of contaminated absorbent, container, and unused contents in accordance with local, state, and federal regulations.

7. Handling and Storage

HANDLING: Wash thoroughly after handling. Wash hands before eating. Remove contaminated clothing and launder before reuse. Use only in a well-ventilated area. Use only with adequate ventilation. Follow all MSDS/label precautions even after container is emptied because it may retain product residues. Avoid breathing fumes, vapors, or mist. Avoid contact with eyes, skin and clothing.

STORAGE: Store in a dry, well ventilated place. Keep container tightly closed when not in use. Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame. Contents under pressure. Do not store above 120 ° F. Store large quantities in buildings designed and protected for storage of NFPA Class I flammable liquids. Keep away from heat, sparks, flame and sources of ignition. Contents under pressure. Do not expose to heat or store above 120 ° F. Avoid excess heat. Product should be stored in tightly sealed containers and protected from heat, moisture, and foreign materials.

8. Exposure Controls/Personal Protection

Chemical Name	CAS-No.	Weight % Less Than	ACGIH TLV-TWA	ACGIH TLV-STEL	OSHA PEL-TWA	OSHA PEL-CEILING
Liquefied Petroleum Gas	68476-86-8	25.0	N.E.	N.E.	N.E.	N.E.
Acetone	67-64-1	20.0	500 ppm	750 ppm	1000 ppm	N.E.
Titanium Dioxide	13463-67-7	15.0	10 mg/m3	N.E.	15 mg/m3 [Total Dust]	N.E.
n-Butyl Acetate	123-86-4	10.0	150 ppm	200 ppm	150 ppm	N.E.
Xylene	1330-20-7	10.0	100 ppm	150 ppm	100 ppm	N.E.
Ethylbenzene	100-41-4	5.0	20 ppm	125 ppm	100 ppm	N.E.
Propylene Glycol Monobutyl Ether	5131-66-8	5.0	N.E.	N.E.	N.E.	N.E.

PERSONAL PROTECTION

ENGINEERING CONTROLS: Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Use explosion-proof ventilation equipment. Provide general dilution of local exhaust ventilation in volume and pattern to keep TLV of hazardous ingredients below acceptable limits. Prevent build-up of vapors by opening all doors and windows to achieve cross-ventilation.

RESPIRATORY PROTECTION: A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. A NIOSH/MSHA approved air purifying respirator with organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits.

SKIN PROTECTION: Use gloves to prevent prolonged skin contact. Use impervious gloves to prevent skin contact and absorption of this material through the skin. Nitrile or Neoprene gloves may afford adequate skin protection.

EYE PROTECTION: Use safety eyewear designed to protect against splash of liquids.

OTHER PROTECTIVE EQUIPMENT: Refer to safety supervisor or industrial hygienist for further guidance regarding types of personal protective equipment and their applications. Refer to safety supervisor or industrial hygienist for further information regarding personal protective equipment and its application.

HYGIENIC PRACTICES: Wash thoroughly with soap and water before eating, drinking or smoking. Remove contaminated clothing immediately and launder before reuse.

9. Physical and Chemical Properties

Appearance:	Aerosolized Mist	**Physical State:**	Liquid
Odor:	Solvent Like	**Odor Threshold:**	N.E.
Relative Density:	0.849	**pH:**	N.A.
Freeze Point, °C:	N.D.	**Viscosity:**	N.D.
Solubility in Water:	Slight	**Partition Coefficient, n-octanol/ water:**	No Information
Decompostion Temp., °C:	No Information		
Boiling Range, °C:	-34 - 500	**Explosive Limits, vol%:**	0.7 - 13.0
Flammability:	Supports Combustion	**Flash Point, °C:**	-105
Evaporation Rate:	Faster than Ether	**Auto-ignition Temp., °C:**	No Information
Vapor Density:	Heavier than Air	**Vapor Pressure:**	N.D.

(See "Other information" Section for abbreviation legend)

10. Stability and Reactivity

CONDITIONS TO AVOID: Avoid temperatures above 120 ° F. Avoid contact with strong acid and strong bases. Avoid all possible sources of ignition.

INCOMPATIBILITY: Incompatible with strong oxidizing agents, strong acids and strong alkalies.

HAZARDOUS DECOMPOSITION: By open flame, carbon monoxide and carbon dioxide. When heated to decomposition, it emits acrid smoke and irritating fumes. Contains solvents which may form carbon monoxide, carbon dioxide, and formaldehyde.

HAZARDOUS POLYMERIZATION: Will not occur under normal conditions.

STABILITY: This product is stable under normal storage conditions.

11. Toxicological information

EFFECTS OF OVEREXPOSURE - EYE CONTACT: Causes Serious Eye Irritation

EFFECTS OF OVEREXPOSURE - SKIN CONTACT: Substance may cause slight skin irritation. May cause skin irritation. Allergic reactions are possible. Prolonged or repeated contact may cause skin irritation.

EFFECTS OF OVEREXPOSURE - INHALATION: Harmful if inhaled. High gas, vapor, mist or dust concentrations may be harmful if inhaled. Avoid breathing fumes, spray, vapors, or mist. High vapor concentrations are irritating to the eyes, nose, throat and lungs. Prolonged or excessive inhalation may cause respiratory tract irritation.

EFFECTS OF OVEREXPOSURE - INGESTION: Harmful if swallowed. Aspiration hazard if swallowed; can enter lungs and cause damage.

EFFECTS OF OVEREXPOSURE - CHRONIC HAZARDS: May cause central nervous system disorder (e.g., narcosis involving a loss of coordination, weakness, fatigue, mental confusion, and blurred vision) and/or damage. High concentrations may lead to central nervous system effects (drowsiness, dizziness, nausea, headaches, paralysis, and blurred vision) and/or damage. Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Overexposure to xylene in laboratory animals has been associated with liver abnormalities, kidney, lung, spleen, eye and blood damage as well as reproductive disorders. Effects in humans, due to chronic overexposure, have included liver, cardiac abnormalities and nervous system damage. IARC lists Ethylbenzene as a possible human carcinogen (group 2B). Contains Titanium Dioxide. Titanium Dioxide is listed as a Group 2B-"Possibly carcinogenic to humans" by IARC. No significant exposure to Titanium

Dioxide is thought to occur during the use of products in which Titanium Dioxide is bound to other materials, such as in paints during brush application or drying. Risk of overexposure depends on duration and level of exposure to dust from repeated sanding of surfaces or spray mist and the actual concentration of Titanium Dioxide in the formula. (Ref: IARC Monograph, Vol. 93, 2010)

PRIMARY ROUTE(S) OF ENTRY: Eye Contact, Ingestion, Inhalation, Skin Absorption, Skin Contact

ACUTE TOXICITY VALUES

The acute effects of this product have not been tested. Data on individual components are tabulated below:

CAS-No.	Chemical Name	Oral LD50	Dermal LD50	Vapor LC50
13463-67-7	Titanium Dioxide	>10000 mg/kg Rat	N.I.	N.I.
123-86-4	n-Butyl Acetate	N.I.	>17600 mg/kg Rabbit	N.I.
1330-20-7	Xylene	4300 mg/kg Rat	N.I.	47635 mg/L Rat
100-41-4	Ethylbenzene	3500 mg/kg Rat	15354 mg/kg Rabbit	17.2 mg/L Rat
5131-66-8	Propylene Glycol Monobutyl Ether	1900 mg/kg Rat	N.I.	N.I.

N.I. - No Information

12. Ecological Information

ECOLOGICAL INFORMATION: Product is a mixture of listed components. Product is a mixture of listed components.

13. Disposal Information

DISPOSAL INFORMATION: Dispose of material in accordance to local, state, and federal regulations and ordinances. Do not allow to enter waterways, wastewater, soil, storm drains or sewer systems.

14. Transport Information

	Domestic (USDOT)	International (IMDG)	Air (IATA)	TDG (Canada)
UN Number:	N.A.	1950	1950	N.A.
Proper Shipping Name:	Paint Products in Limited Quantities	Aerosols	Aerosols	Paint Products in Limited Quantities
Hazard Class:	N.A.	2.1	2.1	N.A.
Packing Group:	N.A.	N.A.	N.A.	N.A.
Limited Quantity:	Yes	Yes	Yes	Yes

15. Regulatory Information

U.S. Federal Regulations:

CERCLA - SARA Hazard Category

This product has been reviewed according to the EPA 'Hazard Categories' promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

Fire Hazard, Pressure Hazard, Acute Health Hazard, Chronic Health Hazard

Sara Section 313:

This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

Chemical Name	CAS-No.
Xylene	1330-20-7
Ethylbenzene	100-41-4

Toxic Substances Control Act:

This product contains the following chemical substances subject to the reporting requirements of TSCA 12(B) if exported from the United States:

No TSCA components exist in this product.

Inventory Information

Country	Value
USA (TSCA)	No Information
Canada (DSL)	No Information
Mexico(INSQ)	No Information
Europe (EINECS)	No Information
Japan (ENCS)	No Information
Philippines (PICCS)	No Information
China (IECSC)	No Information
Australia (AICS)	No Information
Korea (KECI)	No Information
New Zealand (NZIOC)	No Information

No Information

CALIFORNIA PROPOSITION 65:

Warning: This products contains a substance known to the State of California to cause cancer.

Chemical Name	CAS-No.
Titanium Dioxide	13463-67-7
Ethylbenzene	100-41-4

CALIFORNIA PROPOSITION 65 REPRODUCTIVE TOXINS

Warning: This product contains a substance known to the State of California to cause birth defects or other reproductive harm.

Chemical Name	CAS-No.
Toluene	108-88-3

International Regulations:

CANADIAN WHMIS:

This SDS has been prepared in compliance with Controlled Product Regulations except for the use of the 16 headings.

16. Other Information

HMIS RATINGS

Health:	2*	**Flammability:**	4	**Physical Hazard:**	0	**Personal Protection:**	X

CANADIAN WHMIS CLASS: B2 D2A

NFPA RATINGS

Health:	2	**Flammability:**	4	**Instability**	0

VOLATILE ORGANIC COMPOUNDS, g/L: 521

MSDS REVISION DATE: 8/13/2014

REASON FOR REVISION: No Information

Legend: N.A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined

Text for GHS Hazard Statements shown in Section 3 describing each ingredient:

H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H332	Harmful if inhaled.

Icons for GHS Pictograms shown in Section 3 describing each ingredient:

GHS02

GHS07

Rust-Oleum Corporation believes, to the best of its knowledge, information and belief, the information contained herein to be accurate and reliable as of the date of this safety data sheet. However, because the conditions of handling, use, and storage of these materials are beyond our control, we assume no responsibility or liability for personal injury or property damage incurred by the use of these materials. Rust-Oleum Corporation makes no warranty, expressed or implied, regarding the accuracy or reliability of the data or results obtained from their use. All materials may present unknown hazards and should be used with caution. The information and recommendations in this material safety data sheet are offered for the users' consideration and examination. It is the responsibility of the user to determine the final suitability of this information and to comply with all applicable international, federal, state, and local laws and regulations.

Safety Data Sheet

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Document Group:	26-6728-5	**Version Number:**	1.09
Issue Date:	04/06/15	**Supercedes Date:**	07/28/14

SECTION 1: Identification

1.1. Product identifier
3M™ Scotch-Brite™ Products, EXL Unitized AMED, Products, Wheels, Blocks, Discs, Roloc™ TR; TS

1.2. Recommended use and restrictions on use

Recommended use
Abrasive Product

1.3. Supplier's details

MANUFACTURER:	3M
DIVISION:	Abrasive Systems Division
ADDRESS:	3M Center, St. Paul, MN 55144-1000, USA
Telephone:	1-888-3M HELPS (1-888-364-3577)

1.4. Emergency telephone number
1-800-364-3577 or (651) 737-6501 (24 hours)

SECTION 2: Hazard identification

2.1. Hazard classification
Specific Target Organ Toxicity (repeated exposure): Category 1.

2.2. Label elements
Signal word
Danger

Symbols
Health Hazard |

Pictograms

Hazard Statements
Causes damage to organs through prolonged or repeated exposure:

respiratory system |

Precautionary Statements

Prevention:
Do not breathe dust/fume/gas/mist/vapors/spray.
Do not eat, drink or smoke when using this product.
Wash thoroughly after handling.

Response:
Get medical advice/attention if you feel unwell.

Disposal:
Dispose of contents/container in accordance with applicable local/regional/national/international regulations.

2.3. Hazards not otherwise classified
None.

SECTION 3: Composition/information on ingredients

Ingredient	C.A.S. No.	% by Wt
Aluminum Oxide Mineral (non-fibrous)	1344-28-1	35 - 50
Inorganic Fluoride	14075-53-7	3 - 10
Talc	14807-96-6	3 - 10
Lubricant	4485-12-5	1 - 5
Titanium Dioxide	13463-67-7	0.25 - 1.5
Lubricant	64742-52-5	0.01 - 0.5
Cured Resin	Mixture	20 - 35
Nylon Fiber	Mixture	5 - 15
Polyester Scrim	Mixture	2 - 10
Attachment Button	Mixture	0 - 5

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation:
Remove person to fresh air. If you feel unwell, get medical attention.

Skin Contact:
Wash with soap and water. If signs/symptoms develop, get medical attention.

Eye Contact:
Flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. If signs/symptoms persist, get medical attention.

If Swallowed:
Rinse mouth. If you feel unwell, get medical attention.

4.2. Most important symptoms and effects, both acute and delayed
See Section 11.1. Information on toxicological effects.

4.3. Indication of any immediate medical attention and special treatment required
Not applicable

SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media
In case of fire: Use a fire fighting agent suitable for ordinary combustible material such as water or foam to extinguish.

5.2. Special hazards arising from the substance or mixture
None inherent in this product.

Hazardous Decomposition or By-Products

Substance	Condition
Carbon monoxide	During Combustion
Carbon dioxide	During Combustion

5.3. Special protective actions for fire-fighters
No special protective actions for fire-fighters are anticipated.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Observe precautions from other sections.

6.2. Environmental precautions
Not applicable.

6.3. Methods and material for containment and cleaning up
Not applicable.

SECTION 7: Handling and storage

7.1. Precautions for safe handling
For industrial or professional use only. Avoid breathing of dust created by sanding, grinding or machining. Damaged product can break apart during use and cause serious injury to face or eyes. Check product for damage such as cracks or nicks prior to use. Replace if damaged. Always wear eye and face protection when working at sanding or grinding operations or when near such operations. Do not breathe dust/fume/gas/mist/vapors/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Combustible dust may form by action of this product on another material (substrate). Dust generated from the substrate during use of this product may be explosive if in sufficient concentration with an ignition source. Dust deposits should not be allowed to accumulate on surfaces because of the potential for secondary explosions.

7.2. Conditions for safe storage including any incompatibilities
No special storage requirements.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits
If a component is disclosed in section 3 but does not appear in the table below, an occupational exposure limit is not available for the component.

Ingredient	C.A.S. No.	Agency	Limit type	Additional Comments
Aluminum Oxide Mineral (non-fibrous)	1344-28-1	CMRG	TWA:1 fiber/cc	

Aluminum Oxide Mineral (non-fibrous)	1344-28-1	OSHA	TWA(as total dust):15 mg/m3;TWA(respirable fraction):5 mg/m3	
Aluminum, insoluble compounds	1344-28-1	ACGIH	TWA(respirable fraction):1 mg/m3	A4: Not class. as human carcin
Titanium Dioxide	13463-67-7	ACGIH	TWA:10 mg/m3	A4: Not class. as human carcin
Titanium Dioxide	13463-67-7	CMRG	TWA(as respirable dust):5 mg/m3	
Titanium Dioxide	13463-67-7	OSHA	TWA(as total dust):15 mg/m3	
Talc	14807-96-6	ACGIH	TWA(respirable fraction):2 mg/m3	A4: Not class. as human carcin
Talc	14807-96-6	CMRG	TWA(as respirable dust):0.5 mg/m3	
Talc	14807-96-6	OSHA	TWA concentration(as total dust):0.3 mg/m3;TWA concentration(respirable):0.1 mg/m3(2.4 millions of particles/cu. ft.);TWA:20 millions of particles/cu. ft.	
STEARATES	4485-12-5	ACGIH	TWA:10 mg/m3	A4: Not class. as human carcin
Lubricant	64742-52-5	CMRG	TWA:5 mg/m3;STEL:10 mg/m3	
Paraffin oil	64742-52-5	OSHA	TWA(as mist):5 mg/m3	
PETROLEUM DISTILLATES	64742-52-5	OSHA	TWA:2000 mg/m3(500 ppm)	

ACGIH : American Conference of Governmental Industrial Hygienists
AIHA : American Industrial Hygiene Association
CMRG : Chemical Manufacturer's Recommended Guidelines
OSHA : United States Department of Labor - Occupational Safety and Health Administration
TWA: Time-Weighted-Average
STEL: Short Term Exposure Limit
CEIL: Ceiling

8.2. Exposure controls

8.2.1. Engineering controls
Provide appropriate local exhaust ventilation for sanding, grinding or machining. Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below relevant Exposure Limits and/or control dust/fume/gas/mist/vapors/spray. If ventilation is not adequate, use respiratory protection equipment. Warning: Excessive operating speed or generation of extreme heat may result in harmful emissions. Use local exhaust ventilation. Provide local exhaust at process emission sources to control exposure near the source and to prevent the escape of dust into the work area. Ensure that dust-handling systems (such as exhaust ducts, dust collectors, vessels, and processing equipment) are designed in a manner to prevent the escape of dust into the work area (i.e., there is no leakage from the equipment).

8.2.2. Personal protective equipment (PPE)

Eye/face protection

To minimize the risk of injury to face and eyes, always wear eye and face protection when working at sanding or grinding operations or when near such operations. Select and use eye/face protection to prevent contact based on the results of an exposure assessment. The following eye/face protection(s) are recommended:
Safety Glasses with side shields

Skin/hand protection
Wear appropriate gloves to minimize risk of injury to skin from contact with dust or physical abrasion from grinding or sanding.

Respiratory protection

Assess exposure concentrations of all materials involved in the work process. Consider material being abraded when determining the appropriate respiratory protection. Select and use appropriate respirators to prevent inhalation overexposure. An exposure assessment may be needed to decide if a respirator is required. If a respirator is needed, use respirators as part of a full respiratory protection program. Based on the results of the exposure assessment, select from the following respirator type(s) to reduce inhalation exposure:
Half facepiece or full facepiece air-purifying respirator suitable for particulates

For questions about suitability for a specific application, consult with your respirator manufacturer.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

General Physical Form:	Solid
Odor, Color, Grade:	Solid Abrasive Product
Odor threshold	*Not Applicable*
pH	*Not Applicable*
Melting point	*Not Applicable*
Boiling Point	*Not Applicable*
Flash Point	*Not Applicable*
Evaporation rate	*Not Applicable*
Flammability (solid, gas)	Not Classified
Flammable Limits(LEL)	*Not Applicable*
Flammable Limits(UEL)	*Not Applicable*
Vapor Pressure	*Not Applicable*
Vapor Density	*Not Applicable*
Density	*Not Applicable*
Specific Gravity	*Not Applicable*
Solubility In Water	*Not Applicable*
Solubility- non-water	*Not Applicable*
Partition coefficient: n-octanol/ water	*Not Applicable*
Autoignition temperature	*Not Applicable*
Decomposition temperature	*Not Applicable*
Viscosity	*Not Applicable*

SECTION 10: Stability and reactivity

10.1. Reactivity
This material is considered to be non reactive under normal use conditions.

10.2. Chemical stability
Stable.

10.3. Possibility of hazardous reactions
Hazardous polymerization will not occur.

10.4. Conditions to avoid
None known.

10.5. Incompatible materials

None known.

10.6. Hazardous decomposition products

Substance	Condition
None known.	

Refer to section 5.2 for hazardous decomposition products during combustion.

SECTION 11: Toxicological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. In addition, toxicological data on ingredients may not be reflected in the material classification and/or the signs and symptoms of exposure, because an ingredient may be present below the threshold for labeling, an ingredient may not be available for exposure, or the data may not be relevant to the material as a whole.

11.1. Information on Toxicological effects

Signs and Symptoms of Exposure

Based on test data and/or information on the components, this material may produce the following health effects:

Inhalation:
Dust from grinding, sanding or machining may cause irritation of the respiratory system. Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

May cause additional health effects (see below).

Skin Contact:
Mechanical Skin irritation: Signs/symptoms may include abrasion, redness, pain, and itching.

Eye Contact:
Mechanical eye irritation: Signs/symptoms may include pain, redness, tearing and corneal abrasion.

Dust created by grinding, sanding, or machining may cause eye irritation. Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

Ingestion:
No known health effects.

Additional Health Effects:

Prolonged or repeated exposure may cause target organ effects:
Pneumoconiosis: Sign/symptoms may include persistent cough, breathlessness, chest pain, increased amounts of sputum, and changes in lung function tests.

Carcinogenicity:

Ingredient	CAS No.	Class Description	Regulation
Titanium Dioxide	13463-67-7	Grp 2B: Possible human carc	International Agency for Research on Cancer

Additional Information:
This document covers only the 3M product. For complete assessment, when determining the degree of hazard, the material being abraded must also be considered.

This product contains titanium dioxide. Cancer of the lungs has been observed in rats that inhaled high levels of titanium dioxide. No exposure to inhaled titanium dioxide is expected during the normal handling and use of this product. Titanium dioxide was not detected when air sampling was conducted during simulated use of similar products containing titanium dioxide. Therefore, the health effects associated with titanium dioxide are not expected during the normal use of this product.

Toxicological Data

If a component is disclosed in section 3 but does not appear in a table below, either no data are available for that endpoint or the data are not sufficient for classification.

Acute Toxicity

Name	Route	Species	Value
Overall product	Ingestion		No data available: calculated ATE > 5,000 mg/kg
Aluminum Oxide Mineral (non-fibrous)	Dermal		LD50 estimated to be > 5,000 mg/kg
Aluminum Oxide Mineral (non-fibrous)	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 2 3 mg/l
Aluminum Oxide Mineral (non-fibrous)	Ingestion	Rat	LD50 > 5,000 mg/kg
Inorganic Fluoride	Dermal		LD50 estimated to be > 5,000 mg/kg
Inorganic Fluoride	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 5 3 mg/l
Inorganic Fluoride	Ingestion	Rat	LD50 5,854 mg/kg
Talc	Dermal		LD50 Not available
Talc	Ingestion		LD50 Not available
Lubricant	Dermal		LD50 estimated to be > 5,000 mg/kg
Lubricant	Ingestion	Rat	LD50 > 5,000 mg/kg
Titanium Dioxide	Dermal	Rabbit	LD50 > 10,000 mg/kg
Titanium Dioxide	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 6 82 mg/l
Titanium Dioxide	Ingestion	Rat	LD50 > 10,000 mg/kg
Lubricant	Dermal	Rabbit	LD50 > 2,000 mg/kg
Lubricant	Ingestion	Rat	LD50 > 5,000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Aluminum Oxide Mineral (non-fibrous)	Rabbit	No significant irritation
Inorganic Fluoride	Rabbit	No significant irritation
Talc	Rabbit	No significant irritation
Lubricant	similar compounds	No significant irritation
Titanium Dioxide	Rabbit	No significant irritation
Lubricant	Rabbit	Minimal irritation

Serious Eye Damage/Irritation

Name	Species	Value
Aluminum Oxide Mineral (non-fibrous)	Rabbit	No significant irritation
Inorganic Fluoride	Rabbit	No significant irritation
Talc	Rabbit	No significant irritation
Lubricant	similar compounds	Mild irritant
Titanium Dioxide	Rabbit	No significant irritation
Lubricant	Rabbit	Mild irritant

Skin Sensitization

Name	Species	Value
Titanium Dioxide	Human and animal	Not sensitizing
Lubricant	Guinea	Not sensitizing

	pig	

Respiratory Sensitization

Name	Species	Value
Talc	Human	Not sensitizing

Germ Cell Mutagenicity

Name	Route	Value
Aluminum Oxide Mineral (non-fibrous)	In Vitro	Not mutagenic
Talc	In Vitro	Not mutagenic
Talc	In vivo	Not mutagenic
Titanium Dioxide	In Vitro	Not mutagenic
Titanium Dioxide	In vivo	Not mutagenic

Carcinogenicity

Name	Route	Species	Value
Aluminum Oxide Mineral (non-fibrous)	Inhalation	Rat	Not carcinogenic
Talc	Inhalation	Rat	Some positive data exist, but the data are not sufficient for classification
Titanium Dioxide	Ingestion	Multiple animal species	Not carcinogenic
Titanium Dioxide	Inhalation	Rat	Carcinogenic
Lubricant	Ingestion	Rat	Not carcinogenic
Lubricant	Dermal	Mouse	Some positive data exist, but the data are not sufficient for classification

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test Result	Exposure Duration
Talc	Ingestion	Not toxic to development	Rat	NOAEL 1,600 mg/kg	during organogenesis

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Lubricant	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification		NOAEL Not available	

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Aluminum Oxide Mineral (non-fibrous)	Inhalation	pneumoconiosis | pulmonary fibrosis	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	occupational exposure
Talc	Inhalation	pneumoconiosis	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	occupational exposure
Talc	Inhalation	pulmonary fibrosis | respiratory system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 18 mg/m3	113 weeks
Titanium Dioxide	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 0 010 mg/l	2 years
Titanium Dioxide	Inhalation	pulmonary fibrosis	All data are negative	Human	NOAEL Not available	occupational exposure

Aspiration Hazard
For the component/components, either no data are currently available or the data are not sufficient for classification.

Please contact the address or phone number listed on the first page of the SDS for additional toxicological information on this material and/or its components.

SECTION 12: Ecological information

Ecotoxicological information

Please contact the address or phone number listed on the first page of the SDS for additional ecotoxicological information on this material and/or its components.

Chemical fate information

Please contact the address or phone number listed on the first page of the SDS for additional chemical fate information on this material and/or its components.

SECTION 13: Disposal considerations

13.1. Disposal methods
Dispose of contents/ container in accordance with the local/regional/national/international regulations.

The substrate that was abraded must be considered as a factor in the disposal method for this product. Dispose of waste product in a permitted industrial waste facility. As a disposal alternative, incinerate in a permitted waste incineration facility. Proper destruction may require the use of additional fuel during incineration processes.

EPA Hazardous Waste Number (RCRA): Not regulated

SECTION 14: Transport Information

Not regulated per U.S. DOT, IATA or IMO.

These transportation classifications are provided as a customer service. ***As the shipper YOU remain responsible for complying with all applicable laws and regulations, including proper transportation classification and packaging.*** *3M transportation classifications are based on product formulation, packaging, 3M policies and 3M understanding of applicable current regulations. 3M does not guarantee the accuracy of this classification information. This information applies only to transportation classification and* ***not*** ***the packaging, labeling, or marking requirements.*** *The original 3M package is certified for U.S. ground shipment only. If you are shipping by air or ocean, the package may not meet applicable regulatory requirements.*

SECTION 15: Regulatory information

15.1. US Federal Regulations
Contact 3M for more information.

311/312 Hazard Categories:

Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No Immediate Hazard - No Delayed Hazard - Yes

15.2. State Regulations
Contact 3M for more information.

15.3. Chemical Inventories
This product is an article as defined by TSCA regulations, and is exempt from TSCA Inventory listing requirements.

Contact 3M for more information.

15.4. International Regulations
Contact 3M for more information.

This SDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SECTION 16: Other information

NFPA Hazard Classification
Health: 0 **Flammability:** 1 **Instability:** 0 **Special Hazards:** None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

Document Group:	26-6728-5	**Version Number:**	1.09
Issue Date:	04/06/15	**Supercedes Date:**	07/28/14

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GRAINGER
FOR THE ONES WHO GET IT DONE

[X] Close this window MSDS

Common Name: GAS METAL ARC WELDING (GMAW) SOLID WIRE
Manufacturer: HOBART BROTHERS
MSDS Revision Date: 7/2/2010
MSDS Format: No Format Specified

Grainger Item Number(s): 6ETK3, 6ETK4, 6ETK5, 6ETK6, 6ETK7, 6ETK8, 6ETK9, 6ETL0, 6ETL1, 6ETL2, 6ETL3, 6ETL4, 6ETL5, 6ETL6, 6ETL7, 6ETN8, 6ETN9
Manufacturer Model Number(s):

MSDS Table of Contents

Click the desired link below to jump directly to that section in the MSDS.

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SECTION 5 - REACTIVITY DATA - HAZARDOUS DECOMPOSITION/
SECTION 6 - HEALTH HAZARD DATA
SECTION 7 - PRECAUTIONS FOR SAFE HANDLING & USE/APPLICABLE

HOBART BROTHERS

HOBART(R*)
MCKAY(R*)
TRI-MARK(R*)
COREX(R*)

PERFORMANCE WELDING.(TM)

MSDS NO: 415841

REVISED: JULY 2, 2010

D0042

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MATERIAL SAFETY DATA SHEET

FOR U.S. MANUFACTURED OR DISTRIBUTED WELDING CONSUMABLES AND RELATED PRODUCTS. MAY BE USED TO COMPLY WITH OSHA'S HAZARD COMMUNICATION STANDARD, 29 CFR 1910.1200 AND SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT (SARA) OF 1986 PUBLIC LAW 99-499. STANDARD MUST BE CONSULTED FOR SPECIFIC REQUIREMENTS.

SECTION 1 - IDENTIFICATION

top

MANUFACTURER/SUPPLIER NAME: HOBART BROTHERS COMPANY

ADDRESS:
101 TRADE SQUARE EAST
TROY, OH 45373

TELEPHONE NO: (937) 332-4000

EMERGENCY NO: (800) 424-9300

WEBSITE: WWW.HOBARTBROTHERS.COM

PRODUCT TYPE: GAS METAL ARC WELDING (GMAW) SOLID WIRE

AWS SPECIFICATION: ER70S-2, ER70S-3, ER70S-6, AND ER80S-D2

SECTION 2 - HAZARDOUS INGREDIENTS

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IMPORTANT:
THIS SECTION COVERS THE MATERIALS FROM WHICH THIS PRODUCT IS MANUFACTURED. THE FUMES AND GASES PRODUCED DURING WELDING WITH NORMAL USE OF THIS PRODUCT ARE COVERED BY SECTION 5. THE TERM "HAZARDOUS" IN THIS SECTION SHOULD BE INTERPRETED AS A TERM REQUIRED AND DEFINED IN OSHA HAZARD COMMUNICATION STANDARD (29 CFR PART 1910.1200).

HAZARDOUS INGREDIENTS	% WEIGHT	CAS NO.	EXPOSURE LIMIT (MG/M3) OSHA PEL	ACGIH TLV
IRON+	95	7439-89-6	5 R*, 10 (OXIDE FUME)	5 R* (Fe2O3) (A4)
MANGANESE#	1-5	7439-96-5	5 CL ** (FUME) 1.3 STEL*** #	0.2 I*(A4)$ 0.02 R* $, $$
SILICON+	0.5-1.5	7440-21-3	5 R*	3 R*
(AMORPHOUS SILICA FUME)		69012-64-2	0.8	3 R*
COPPER# (1)	0.1-0.5	7440-50-8	0.1 (FUME), 1 (DUST)	0.2 (FUME), 1 (DUST AND MISTS)
MOLYBDENUM (2)	0.1-1	7439-98-7	5 R*	10 I*; 3 R* (ELEMENTAL AND INSOLUBLE) 0.5 R* (SOLUBLE COMPOUNDS) (A3)

(1):
COPPER, IF CONTAINED IN THE PRODUCT, IS CLEARLY VISIBLE AND ONLY PRESENT AS A SURFACE COATING.

(2): PRESENT ONLY IN ER80S-D2.

+: AS A NUISANCE PARTICULATE COVERED UNDER

":PARTICULATES NOT OTHERWISE REGULATED" BY OSHA OR

": PARTICULATES NOT OTHERWISE CLASSIFIED" BY ACGIH

R*: RESPIRABLE FRACTION

I*: INHALABLE FRACTION

**: CEILING LIMIT

***: SHORT TERM EXPOSURE LIMIT

#: REPORTABLE MATERIAL UNDER SECTION 313 OF SARA

(A3):
CONFIRMED ANIMAL CARCINOGEN WITH UNKNOWN RELEVANCE TO HUMANS PER ACGIH

(A4): NOT CLASSIFIABLE AS A HUMAN CARCINOGEN PER ACGIH

#: NIOSH REL TWA AND STEL

$: LISTED UNDER ACGIH NOTICE OF INTENDED CHANGES FOR Mn IN 2010

$$: LIMIT OF 0.02 MG/M3 IS PROPOSED FOR RESPIRABLE Mn IN 2011 BY ACGIH

THE EXPOSURE LIMIT FOR WELDING FUME HAS BEEN ESTABLISHED AT 5 MG/M3 WITH OSHA'S PEL. THE INDIVIDUAL COMPLEX COMPOUNDS WITHIN THE FUME MAY HAVE LOWER EXPOSURE LIMITS THAN THE GENERAL WELDING FUME PEL. AN INDUSTRIAL HYGIENIST, THE OSHA PERMISSIBLE EXPOSURE LIMITS FOR AIR CONTAMINANTS (29 CFR 1910.1000), AND THE ACGIH THRESHOLD LIMIT VALUES SHOULD BE CONSULTED TO DETERMINE THE SPECIFIC FUME CONSTITUENTS PRESENT AND THEIR RESPECTIVE EXPOSURE LIMITS.

SECTION 3 - PHYSICAL/CHEMICAL CHARACTERISTICS

top

WELDING CONSUMABLES APPLICABLE TO THIS SHEET ARE SOLID AND NONVOLATILE AS SHIPPED.

SECTION 4 - FIRE AND EXPLOSION HAZARD DATA

top

WELDING CONSUMABLES APPLICABLE TO THIS SHEET AS SHIPPED ARE NONREACTIVE, NONFLAMMABLE, NONEXPLOSIVE AND ESSENTIALLY NONHAZARDOUS UNTIL WELDED. WELDING ARCS AND SPARKS CAN IGNITE COMBUSTIBLES AND FLAMMABLE PRODUCTS. SEE AMERICAN NATIONAL STANDARD Z49.1 REFERENCED IN SECTION 7.

SECTION 5 - REACTIVITY DATA - HAZARDOUS DECOMPOSITION/

top

INDUSTRIAL HYGIENE INFORMATION

WELDING FUMES AND GASES CANNOT BE CLASSIFIED SIMPLY. THE COMPOSITION AND QUANTITY OF BOTH ARE DEPENDENT UPON THE METAL BEING WELDED, THE PROCESS, PROCEDURES AND ELECTRODES USED. MOST FUME INGREDIENTS ARE PRESENT AS COMPLEX OXIDES AND COMPOUNDS AND NOT AS PURE METALS.

OTHER CONDITIONS WHICH ALSO INFLUENCE THE COMPOSITION AND QUANTITY OF THE FUMES AND GASES TO WHICH WORKERS MAY BE EXPOSED INCLUDE: COATINGS ON THE METAL BEING WELDED (SUCH AS PAINT, PLATING OR GALVANIZING), THE NUMBER OF WELDERS AND THE VOLUME OF THE WORK AREA, THE QUALITY AND AMOUNT OF VENTILATION, THE POSITION OF THE WELDER'S HEAD WITH RESPECT TO THE FUME PLUME, AS WELL AS THE PRESENCE OF CONTAMINANTS IN THE ATMOSPHERE (SUCH AS CHLORINATED HYDROCARBON VAPORS FROM CLEANING AND DEGREASING ACTIVITIES). WHEN THE ELECTRODE IS CONSUMED, THE FUME AND GAS DECOMPOSITION PRODUCTS GENERATED ARE DIFFERENT IN PERCENT AND FORM FROM THE INGREDIENTS LISTED IN SECTION 2. DECOMPOSITION PRODUCTS OF NORMAL OPERATION INCLUDE THOSE ORIGINATING FROM THE VOLATILIZATION, REACTION OR OXIDATION OF THE MATERIALS SHOWN IN SECTION 2, PLUS THOSE FROM THE BASE METAL AND COATING, ETC., AS NOTED ABOVE. REASONABLY EXPECTED CONSTITUENTS OF THE FUME WOULD INCLUDE:

PRIMARILY: COMPLEX OXIDES OF IRON

SECONDARILY:
COMPLEX OXIDES OF MANGANESE, SILICON AND COPPER. MOLYBDENUM COMPOUNDS MAY BE PRESENT IN ER80S-D2.

MONITOR FOR THE MATERIALS IDENTIFIED IN SECTION 2. FUMES FROM THE USE OF THIS PRODUCT MAY CONTAIN COPPER, MANGANESE COMPOUNDS, AND AMORPHOUS SILICA WHOSE EXPOSURE LIMITS ARE LOWER THAN THE 5 MG/M3 PEL FOR GENERAL WELDING FUME. GASEOUS REACTION PRODUCTS MAY INCLUDE CARBON MONOXIDE AND CARBON DIOXIDE. OZONE AND NITROGEN OXIDES MAY BE FORMED BY THE RADIATION FROM THE

ARC. ONE RECOMMENDED WAY TO DETERMINE THE COMPOSITION AND QUANTITY OF FUMES AND GASES TO WHICH WORKERS ARE EXPOSED IS TO TAKE AN AIR SAMPLE INSIDE THE WELDER'S HELMET IF WORN OR IN THE WORKER'S BREATHING ZONE. (SEE ANSI/AWS F1.1, AVAILABLE FROM THE "AMERICAN WELDING SOCIETY", P.O. BOX 351040, MIAMI, FL 33135. ALSO, FROM AWS IS F1.3 "EVALUATING CONTAMINANTS IN THE WELDING ENVIRONMENT - A SAMPLING STRATEGY GUIDE", WHICH GIVES ADDITIONAL ADVICE ON SAMPLING.)

SECTION 6 - HEALTH HAZARD DATA

top

EFFECTS OF OVEREXPOSURE:

ELECTRIC ARC WELDING MAY CREATE ONE OR MORE OF THE FOLLOWING HEALTH HAZARDS:
ARC RAYS CAN INJURE EYES AND BURN SKIN.
ELECTRIC SHOCK CAN KILL. SEE SECTION 7.
FUMES AND GASES CAN BE DANGEROUS TO YOUR HEALTH.
PRIMARY ROUTES OF ENTRY ARE THE RESPIRATORY SYSTEM, EYES AND/OR SKIN.

SHORT-TERM (ACUTE) OVEREXPOSURE EFFECTS:

WELDING FUMES:
MAY RESULT IN DISCOMFORT SUCH AS DIZZINESS, NAUSEA OR DRYNESS OR IRRITATION OF NOSE, THROAT OR EYES.

IRON, IRON OXIDE: NONE ARE KNOWN. TREAT AS NUISANCE DUST OR FUME.

MANGANESE:
METAL FUME FEVER CHARACTERIZED BY CHILLS, FEVER, UPSET STOMACH, VOMITING, IRRITATION OF THE THROAT AND ACHING OF BODY. RECOVERY IS GENERALLY COMPLETE WITHIN 48 HOURS OF THE OVEREXPOSURE.

SILICA (AMORPHOUS):
DUST AND FUMES MAY CAUSE IRRITATION OF THE RESPIRATORY SYSTEM, SKIN AND EYES.

COPPER:
METAL FUME FEVER CHARACTERIZED BY METALLIC TASTE, TIGHTNESS OF CHEST AND FEVER. SYMPTOMS MAY LAST 24 TO 48 HOURS FOLLOWING OVEREXPOSURE.

MOLYBDENUM: IRRITATION OF THE EYES, NOSE AND THROAT.

LONG-TERM (CHRONIC) OVEREXPOSURE EFFECTS:

WELDING FUMES:
EXCESS LEVELS MAY CAUSE BRONCHIAL ASTHMA, LUNG FIBROSIS, PNEUMOCONIOSIS OR "SIDEROSIS".

IRON, IRON OXIDE FUMES - CAN:
CAUSE SIDEROSIS (DEPOSITS OF IRON IN LUNGS) WHICH SOME RESEARCHERS BELIEVE MAY AFFECT PULMONARY FUNCTION. LUNGS WILL CLEAR I N TIME WHEN EXPOSURE TO IRON AND ITS COMPOUNDS CEASES. IRON AND MAGNETITE (Fe3O4) ARE NOT REGARDED AS FIBROGENIC MATERIALS.

MANGANESE:
LONG-TERM OVEREXPOSURE TO MANGANESE COMPOUNDS MAY AFFECT THE CENTRAL NERVOUS SYSTEM. SYMPTOMS MAY BE SIMILAR TO PARKINSON'S DISEASE AND CAN INCLUDE SLOWNESS, CHANGES IN HANDWRITING, GAIT IMPAIRMENT, MUSCLE SPASMS AND CRAMPS AND LESS COMMONLY, TREMOR AND BEHAVIORAL CHANGES. EMPLOYEES WHO ARE OVEREXPOSED TO MANGANESE COMPOUNDS SHOULD BE SEEN BY A PHYSICIAN FOR EARLY DETECTION OF NEUROLOGIC PROBLEMS. OVEREXPOSURE TO MANGANESE AND MANGANESE COMPOUNDS ABOVE SAFE EXPOSURE LIMITS CAN CAUSE IRREVERSIBLE DAMAGE TO THE CENTRAL NERVOUS SYSTEM, INCLUDING THE BRAIN, SYMPTOMS OF WHICH MAY INCLUDE SLURRED SPEECH, LETHARGY, TREMOR, MUSCULAR WEAKNESS, PSYCHOLOGICAL DISTURBANCES AND SPASTIC GAIT.

SILICA (AMORPHOUS):

RESEARCH INDICATES THAT SILICA IS PRESENT IN WELDING FUME IN THE AMORPHOUS FORM. LONG TERM OVEREXPOSURE MAY CAUSE PNEUMOCONIOSIS. NONCRYSTALLINE FORMS OF SILICA (AMORPHOUS SILICA) ARE CONSIDERED TO HAVE LITTLE FIBROTIC POTENTIAL.

COPPER:
COPPER POISONING HAS BEEN REPORTED IN THE LITERATURE FROM EXPOSURE TO HIGH LEVELS OF COPPER. LIVER DAMAGE CAN OCCUR DUE TO COPPER ACCUMULATING IN THE LIVER CHARACTERIZED BY CELL DESTRUCTION AND CIRRHOSIS. HIGH LEVELS OF COPPER MAY CAUSE ANEMIA AND JAUNDICE. HIGH LEVELS OF COPPER MAY CAUSE CENTRAL NERVOUS SYSTEM DAMAGE CHARACTERIZED BY NERVE FIBER SEPARATION AND CEREBRAL DEGENERATION.

MOLYBDENUM:
PROLONGED OVEREXPOSURE MAY RESULT IN LOSS OF APPETITE, WEIGHT LOSS, LOSS OF MUSCLE COORDINATION, DIFFICULTY IN BREATHING AND ANEMIA.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:
PERSONS WITH PRE-EXISTING IMPAIRED LUNG FUNCTIONS (ASTHMA-LIKE CONDITIONS). PERSONS WITH A PACEMAKER SHOULD NOT GO NEAR WELDING AND CUTTING OPERATIONS UNTIL THEY HAVE CONSULTED THEIR DOCTOR AND OBTAINED INFORMATION FROM THE MANUFACTURER OF THE DEVICE. RESPIRATORS ARE TO BE WORN ONLY AFTER BEING MEDICALLY CLEARED BY YOUR COMPANY-DESIGNATED PHYSICIAN.

EMERGENCY AND FIRST AID PROCEDURES:
CALL FOR MEDICAL AID. EMPLOY FIRST AID TECHNIQUES RECOMMENDED BY THE AMERICAN RED CROSS.

EYES AND SKIN:
IF IRRITATION OR FLASH BURNS DEVELOP AFTER EXPOSURE, CONSULT A PHYSICIAN.

CARCINOGENICITY:
WELDING FUMES MUST BE CONSIDERED AS POSSIBLE CARCINOGENS UNDER OSHA (29 CFR 1910.1200).

CALIFORNIA PROPOSITION 65:

WARNING:
THIS PRODUCT, WHEN USED FOR WELDING OR CUTTING, PRODUCES FUMES OR GASES WHICH CONTAIN CHEMICALS KNOWN TO THE STATE OF CALIFORNIA TO CAUSE BIRTH DEFECTS AND, IN SOME CASES, CANCER. (CALIFORNIA HEALTH & SAFETY CODE SECTION 25249.5 ET SEQ.)

SECTION 7 - PRECAUTIONS FOR SAFE HANDLING & USE/APPLICABLE

top

CONTROL MEASURES

READ AND UNDERSTAND THE MANUFACTURER'S INSTRUCTIONS AND THE PRECAUTIONARY LABEL ON THE PRODUCT. SEE AMERICAN NATIONAL STANDARD Z49.1; SAFETY IN WELDING AND CUTTING PUBLISHED BY THE AMERICAN WELDING SOCIETY, P.O. BOX 351040, MIAMI, FL 33135 AND OSHA PUBLICATION 2206 (29 CFR 1910), U.S. GOVERNMENT PRINTING OFFICE, WASHINGTON, DC 20402 FOR MORE DETAIL ON ANY OF THE FOLLOWING.

VENTILATION:
USE ENOUGH VENTILATION, LOCAL EXHAUST AT THE ARC OR BOTH, TO KEEP THE FUMES AND GASES BELOW PEL/TLVS IN THE WORKER'S BREATHING ZONE AND THE GENERAL AREA. TRAIN THE WELDER TO KEEP HIS HEAD OUT OF THE FUMES.

RESPIRATORY PROTECTION:
USE NIOSH APPROVED OR EQUIVALENT FUME RESPIRATOR OR AIR SUPPLIED RESPIRATOR WHEN WELDING IN CONFINED SPACE OR WHERE LOCAL EXHAUST OR VENTILATION DOES NOT KEEP EXPOSURE BELOW PEL/TLVS.

EYE PROTECTION:
WEAR HELMET OR USE FACE SHIELD WITH FILTER LENS. AS A RULE OF THUMB BEGIN WITH SHADE NUMBER 14. ADJUST IF NEEDED BY SELECTING THE NEXT LIGHTER AND/OR DARKER SHADE NUMBER. PROVIDE PROTECTIVE SCREENS AND FLASH GOGGLES, IF

NECESSARY, TO SHIELD OTHERS.

PROTECTIVE CLOTHING:
WEAR HAND, HEAD AND BODY PROTECTION WHICH HELP TO PREVENT INJURY FROM RADIATION, SPARKS AND ELECTRICAL SHOCK. SEE ANSI Z49.1. AT A MINIMUM THIS INCLUDES WELDER'S GLOVES AND A PROTECTIVE FACE SHIELD AND MAY INCLUDE ARM PROTECTORS, APRONS, HATS, SHOULDER PROTECTION AS WELL AS DARK NONSYNTHETIC CLOTHING. TRAIN THE WELDER NOT TO TOUCH LIVE ELECTRICAL PARTS AND TO INSULATE HIMSELF FROM WORK AND GROUND.

PROCEDURE FOR CLEANUP OF SPILLS OR LEAKS: NOT APPLICABLE.

WASTE DISPOSAL:
PREVENT WASTE FROM CONTAMINATING SURROUNDING ENVIRONMENT. DISCARD ANY PRODUCT, RESIDUE, DISPOSABLE CONTAINER OR LINER IN AN ENVIRONMENTALLY ACCEPTABLE MANNER, IN FULL COMPLIANCE WITH FEDERAL, STATE AND LOCAL REGULATIONS.

SPECIAL PRECAUTIONS (IMPORTANT):
MAINTAIN EXPOSURE BELOW THE PEL/TLVS. USE INDUSTRIAL HYGIENE MONITORING TO ENSURE THAT YOUR USE OF THIS MATERIAL DOES NOT CREATE EXPOSURES WHICH EXCEED PEL/TLVS. ALWAYS USE EXHAUST VENTILATION.

REFER TO THE FOLLOWING SOURCES FOR IMPORTANT ADDITIONAL INFORMATION:
ANSI Z49.1 FROM THE AMERICAN WELDING SOCIETY, P.O. BOX 351040, MIAMI, FL 33135 AND OSHA (29 CFR 1910) FROM THE U.S. DEPARTMENT OF LABOR, WASHINGTON, DC 20210.

HOBART BROTHERS COMPANY BELIEVES THIS DATA TO BE ACCURATE AND TO REFLECT QUALIFIED EXPERT OPINION REGARDING CURRENT RESEARCH. HOWEVER, HOBART BROTHERS COMPANY CANNOT MAKE ANY EXPRESSED OR IMPLIED WARRANTY AS TO THIS INFORMATION.

SAFETY DATA SHEET

This Safety Data Sheet conforms to ANSI Z400.5, and to the format requirements and the International Chemical Safety Cards of the Global Harmonizing System.
THIS SDS COMPLIES WITH 29 CFR 1910.1200 (HAZARD COMMUNICATION STANDARD)
IMPORTANT: Read this SDS before handling & disposing of this product.
Pass this information on to employees, customers, & users of this product.

SECTION 1. IDENTIFICATION OF THE SUBSTANCE OR MIXTURE AND OF THE SUPPLIER

NEW MSDS DATE: 01/28/2012
PRODUCT IDENTITY: CROWN PSC 1000
COMPANY IDENTITY: Packaging Service Co., Inc.
COMPANY ADDRESS: 1904 Mykawa Road / P O Box 875
COMPANY CITY: Pearland, TX 77581
COMPANY PHONE: 1-281-485-1458
EMERGENCY PHONES: CHEMTREC: 1-800-424-9300 (USA)
CANUTEC: 1-613-996-6666 (CANADA)

SECTION 2. HAZARDS IDENTIFICATION

WARNING!

RISK STATEMENTS:
R36/37/38 Irritating to eyes, respiratory system and skin.
R65 Harmful: may cause lung damage if swallowed.

SAFETY STATEMENTS:
S2 Keep out of the reach of children.
S23 Do not breathe gas, fumes, vapor, or spray.
S24 Avoid contact with skin.
S62 If swallowed, do not induce vomiting; seek medical advice immediately and show this container or label.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

MATERIAL	CAS#	EINECS#	WT %
Medium Aliphatic Naphtha	64742-47-8	265-200-4	95-100

Trace components: Trace ingredients (if any) are present in < 1% concentration, (< 0.1% for potential carcinogens, reproductive toxins, respiratory tract mutagens, and sensitizers). None of the trace ingredients contribute significant additional hazards at the concentrations that may be present in this product. All pertinent hazard information has been provided in this document, per the requirements of the Federal Occupational Safety and Health Administration Standard (29 CFR 1910.1200), U.S. State equivalents, and Canadian Hazardous Materials Identification System Standard (CPR 4).

SEE SECTIONS 8, 11 & 12 FOR TOXICOLOGICAL INFORMATION.

SECTION 4. FIRST AID MEASURES

EYE CONTACT:
If this product enters the eyes, open eyes while under gently running water. Use sufficient force to open eyelids. "Roll" eyes to expose more surface. Minimum flushing is for 15 minutes. Seek immediate medical attention.

SKIN CONTACT:
If the product contaminates the skin, immediately begin decontamination with running water. Minimum flushing is for 15 minutes. Remove contaminated clothing, taking care not to contaminate eyes. If skin becomes irritated and irritation persists, medical attention may be necessary. Wash contaminated clothing before reuse, discard contaminated shoes.

INHALATION:
After high vapor exposure, remove to fresh air. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. Keep person warm and at rest. breathing is difficult, give oxygen. If breathing has stopped, trained personnel should immediately begin artificial respiration. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. If the heart has stopped, trained personnel should immediately begin cardiopulmonary resuscitation (CPR). Seek immediate medical attention. In case of inhalation of decomposition products in a fire, symptoms may be delayed.The exposed person may need to be kept under medical surveillance for 48 hours.

SWALLOWING:
If swallowed, CALL PHYSICIAN OR POISON CONTROL CENTER FOR MOST CURRENT INFORMATION. If professional advice is not available, give two glasses of water to drink. DO NOT INDUCE VOMITING. Never induce vomiting or give liquids to someone who is unconscious, having convulsions, or unable to swallow. Seek immediate medical attention.

NOTES TO PHYSICIAN:
There is no specific antidote. Treatment of overexposure should be directed at the control of symptoms and the clinical condition of the patient. Any material aspirated during vomiting may cause lung injury. Therefore, emesis should not be induced mechanically or pharmacologically. If it is considered necessary to evacuate the stomach contents, this should be done by means least likely to cause aspiration (such as: Gastric lavage after endotracheal intubation).

SECTION 5. FIRE FIGHTING MEASURES

FIRE & EXPLOSION PREVENTIVE MEASURES
NO open flames. Above flash point, use a closed system, ventilation, explosion-proof electrical equipment, lighting.

EXTINGUISHING MEDIA
Use dry powder, AFFF, carbon dioxide.

SPECIAL FIRE FIGHTING PROCEDURES
Water spray may be ineffective on fire but can protect fire-fighters & cool closed containers. Use fog nozzles if water is used.
Do not enter confined fire-space without full bunker gear.
(Helmet with face shield, bunker coats, gloves & rubber boots).
Use NIOSH approved positive-pressure self-contained breathing apparatus.

UNUSUAL EXPLOSION AND FIRE PROCEDURES
COMBUSTIBLE!
Isolate from oxidizers, heat, & open flame.
Closed containers may explode if exposed to extreme heat.
Applying to hot surfaces requires special precautions.
Empty container very hazardous! Continue all label precautions!

SECTION 6. ACCIDENTAL RELEASE MEASURES

SPILL AND LEAK RESPONSE AND ENVIRONMENTAL PRECAUTIONS:
Uncontrolled releases should be responded to by trained personnel using pre-planned procedures. Proper protective equipment should be used. In case of a spill, clear the affected area, protect people, and respond with trained personnel.

PERSONAL PROTECTIVE EQUIPMENT
The proper personal protective equipment for incidental releases (such as: 1 Liter of the product released in a well-ventilated area), use impermeable gloves (triple-gloves (rubber gloves and nitrile gloves, over latex gloves), goggles, face shield, and appropriate body protection. In the event of a large release, use impermeable gloves, specific for the material handled, chemically resistant suit and boots, and hard hat. Self-Contained Breathing Apparatus or respirator may be required where engineering controls are not adequate or conditions for potential exposure exist. When respirators are required, select NIOSH/MSHA approved based on actual or potential airborne concentrations in accordance with latest OSHA and/or ANSI recommendations.

ENVIRONMENTAL PRECAUTIONS:
Stop spill at source. Construct temporary dikes of dirt, sand, or any appropriate readily available material to prevent spreading of the material. Close or cap valves and/or block or plug hole in leaking container and transfer to another container. Keep from entering storm sewers and ditches which lead to waterways, and if necessary, call the local fire or police department for immediate emergency assistance.

CONTAINMENT AND CLEAN-UP MEASURES:
Absorb spilled liquid with polypads or other suitable absorbent materials. If necessary, neutralize using suitable buffering material, (acid with soda ash or base with phosphoric acid), and test area with litmus paper to confirm neutralization. Clean up with non-combustible absorbent (such as: sand, soil, and so on). Shovel up and place all spill residue in suitable containers. dispose of at an appropriate waste disposal facility according to current applicable laws and regulations and product characteristics at time of disposal (see Section 13 - Disposal Considerations).

SECTION 7. HANDLING AND STORAGE

HANDLING
Isolate from oxidizers, heat, & open flame. Use only with adequate ventilation.
Avoid breathing of vapor or spray mist. Avoid contact with skin & eyes.
Wear OSHA Standard goggles or face shield. Consult Safety Equipment Supplier. Wear goggles, face shield, gloves, apron & footwear impervious to material. Wash clothing before reuse.
Avoid free fall of liquid. Ground containers when transferring. Do not flame cut, braze, or weld. Empty container very hazardous! Continue all label precautions!
To minimize static discharge when transferring, ensure electrical continuity by bonding and grounding all equipment. Use an inlet line diameter of at least 3.5 inches (8.9 centimeters) with a maximum flow rate of 1 meter/second.

STORAGE
Isolate from strong oxidants.
Keep container tightly closed & upright when not in use to prevent leakage.

NONBULK: CONTAINERS:
Store containers in a cool, dry location, away from direct sunlight, sources of intense heat, or where freezing is possible. Material should be stored in secondary containers or in a diked area, as appropriate. Store containers away from incompatible chemicals (see Section 10, Stability and Reactivity). Post warning and "NO SMOKING" signs in storage and use areas, as appropriate. Empty containers should be handled with care. Never store food, feed, or drinking water in containers which held this product.

BULK CONTAINERS:
All tanks and pipelines which contain this material must be labeled. Perform routine maintenance on tanks or pipelines which contain this product. Report all leaks immediately to the proper personnel.

SECTION 7. HANDLING AND STORAGE (CONTINUED)

TANK CAR SHIPMENTS:
Tank cars carrying this product should be loaded and unloaded in strict accordance with tank-car manufacturer's recommendation and all established on-site safety procedures. Appropriate personal protective equipment must be used (see Section 8, Engineering Controls and Personal Protective Equipment.). All loading and unloading equipment must be inspected, prior to each use. Loading and unloading operations must be attended, at all times. Tank cars must be level, brakes must be set or wheels must be locked or blocked prior to loading or unloading. Tank car (for loading) or storage tanks (for unloading) must be verified to be correct for receiving this product and be properly prepared, prior to starting the transfer operations. Hoses must be verified to be in the correct positions, before starting transfer operations. A sample (if required) must be taken and verified (if required) prior to starting transfer operations. All lines must be blown-down and purged before disconnecting them from the tank car or vessel.

PROTECTIVE PRACTICES DURING MAINTENANCE OF CONTAMINATED EQUIPMENT:
Follow practices indicated in Section 6 (Accidental Release Measures). Make certain application equipment is locked and tagged-out safely. Always use this product in areas where adequate ventilation is provided. Collect all rinsates and dispose of according to applicable Federal, State, Provincial, or local procedures.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

MATERIAL	CAS#	EINECS#	TWA (OSHA)	TLV (ACGIH)
Medium Aliphatic Naphtha	64742-47-8	265-200-4	5 mg/m3	5 mg/m3

This product contains no EPA Hazardous Air Pollutants (HAP) in amounts > 0.1%.
EPA Hazardous Air Pollutants may be present in trace amounts (less than 0.1%):
Cumene, Polycyclic Aromatics

RESPIRATORY EXPOSURE CONTROLS
Seek professional advice prior to respirator selection and use.
Maintain airborne contaminant concentrations below exposure limits given above. If respiratory protection is needed, use only protection authorized in 29 CFR 1910.134, European Standard EN 149, or applicable State regulations. If adequate ventilation is not available or there is potential for airborne exposure above the exposure limits, a respirator may be worn up to the respirator exposure limitations, check with respirator equipment manufacturer's recommendations/limitations. For a higher level of protection, use positive pressure supplied air respiration protection or Self-Contained Breathing Apparatus or if oxygen levels are below 19.5% or are unknown.

EMERGENCY OR PLANNED ENTRY INTO UNKNOWN CONCENTRATIONS OR IDLH CONDITIONS
Positive pressure, full-face piece Self-Contained Breathing Apparatus; or positive pressure, full-face piece Self-Contained Breathing Apparatus with an auxilliary positive pressure Self-Contained Breathing Apparatus.

VENTILATION

LOCAL EXHAUST:	Necessary	MECHANICAL (GENERAL):	Necessary
SPECIAL:	None	OTHER:	None

Please refer to ACGIH document, "Industrial Ventilation, A Manual of Recommended Practices", most recent edition, for details.

EYE PROTECTION:
Splash goggles or safety glasses. Face-shields are recommended when the operation can generate splashes, sprays or mists.

HAND PROTECTION:
Wear appropriate impervious gloves for routine industrial use. Use impervious gloves for spill response, as stated in Section 6 of this SDS (Accidental Release Measures).
NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION (CONTINUED)

BODY PROTECTION:
Use body protection appropriate for task. Cover-all, rubber aprons, or chemical protective clothing made from impervious materials are generally acceptable, depending on the task.

WORK & HYGIENIC PRACTICES:
Provide readily accessible eye wash stations & safety showers. Wash at end of each shift & before eating, smoking or using the toilet. Remove clothing that becomes contaminated. Destroy contaminated leather articles. Launder or discard contaminated clothing.

SECTION 9. PHYSICAL & CHEMICAL PROPERTIES

APPEARANCE:	Liquid, Water-White
ODOR:	Mild
ODOR THRESHOLD:	Not Available
pH (Neutrality):	Not Applicable
MELTING POINT/FREEZING POINT:	Not Available
BOILING RANGE (IBP,50%,Dry Point):	186 210 257 C / 367 410 495 F
FLASH POINT (TEST METHOD):	61 C / 143 F (PM)
EVAPORATION RATE (n-BUTYL ACETATE=1):	0.062
FLAMMABILITY CLASSIFICATION:	Class IIIA
LOWER FLAMMABLE LIMIT IN AIR (% by vol):	0.937
UPPER FLAMMABLE LIMIT IN AIR (% by vol):	Not Available
VAPOR PRESSURE (mm of Hg)@20 C	0.260
VAPOR DENSITY (air=1):	6.1
GRAVITY @ 68/68 F / 20/20 C:	
SPECIFIC GRAVITY (Water=1):	0.808
POUNDS/GALLON:	6.731
WATER SOLUBILITY:	Negligible
PARTITION COEFFICIENT (n-Octane/Water):	Not Available
AUTO IGNITION TEMPERATURE:	254 C / 490 F
DECOMPOSITION TEMPERATURE:	Not Available
REFRACTIVE INDEX:	1.448
VOC'S (>0.44 Lbs/Sq In) :	0.0 Vol% /0.0 g/L / 0.000 Lbs/Gal
TOTAL VOC'S (TVOC)*:	80.0 Vol% / 631.4 g/L / 5.2 Lbs/Gal
NONEXEMPT VOC'S (CVOC)*:	80.0 Vol% / 631.4 g/L / 5.2 Lbs/Gal
HAZARDOUS AIR POLLUTANTS (HAPS):	0.0 Wt% /0.0 g/L / 0.000 Lbs/Gal
NONEXEMPT VOC PARTIAL PRESSURE (mm of Hg @ 20 C)	0.253

* Using California South Coast Air Quality Management District (SCAQMD) Rule 1143.

SECTION 10. STABILITY & REACTIVITY

STABILITY
Stable under normal conditions.

CONDITIONS TO AVOID
Isolate from oxidizers, heat, & open flame.

MATERIALS TO AVOID
Reacts with strong oxidants, causing fire & explosion hazard.

HAZARDOUS DECOMPOSITION PRODUCTS
Carbon Monoxide, Carbon Dioxide from burning.

HAZARDOUS POLYMERIZATION
Will not occur.

SECTION 11. TOXICOLOGICAL INFORMATION

ACUTE HAZARDS

EYE & SKIN CONTACT:
Primary irritation to skin, defatting, dermatitis.
Primary irritation to eyes, redness, tearing, blurred vision.
Liquid can cause eye irritation. Wash thoroughly after handling.

INHALATION:
Anesthetic. Irritates respiratory tract. Acute overexposure can cause serious nervous system depression. Vapor harmful.

SWALLOWING:
Harmful or fatal if swallowed.
Swallowing can cause abdominal irritation, nausea, vomiting & diarrhea.
The symptoms of chemical pneumonitis may not show up for a few days.

SUBCHRONIC HAZARDS/CONDITIONS AGGRAVATED

CONDITIONS AGGRAVATED
Persons with severe skin, liver or kidney problems should avoid use.

CHRONIC HAZARDS

CANCER, REPRODUCTIVE & OTHER CHRONIC HAZARDS:
Leukemia been reported in humans from Benzene.
This product contains less than 1 ppm of Benzene.
Not considered hazardous in such low concentrations.
Absorption thru skin may be harmful.

IRRITANCY OF PRODUCT: This product is irritating to contaminated tissue.

SENSITIZATION TO THE PRODUCT: No component of this product is known to be a sensitizer.

MUTAGENICITY: This product is not reported to produce mutagenic effects in humans.

EMBRYOTOXICITY: This product is not reported to produce embryotoxic effects in humans.

TERATOGENICITY: This product is not reported to produce teratogenic effects in humans.

REPRODUCTIVE TOXICITY: This product is not reported to cause reproductive effects in humans.

A mutagen is a chemical which causes permanent changes to genetic material (DNA) such that the changes will propagate through generational lines. An embryotoxin is a chemical which causes damage to a developing embryo (such as: within the eight weeks of pregnancy in humans), but the damage does not propagate across generational lines. A teratogen is a chemical which causes damage to a developing fetus, but the damage does not propagate across generational lines. A reproductive toxin is any substance which interferes in any way with the reproductive process.

MAMMALIAN TOXICITY INFORMATION

No mammalian information is available on this product.

SECTION 12. ECOLOGICAL INFORMATION

ALL WORK PRACTICES MUST BE AIMED AT ELIMINATING ENVIRONMENTAL CONTAMINATION.

EFFECT OF MATERIAL ON PLANTS OR ANIMALS:
This product may be harmful or fatal to plant and animal life if released into the environment. Refer to Section 11 (Toxicological Information) for further data on the effects of this product's components on test animals.

EFFECT OF MATERIAL ON AQUATIC LIFE:
No aquatic environmental information is available on this product.
Environmental effects of the substance have not been investigated adequately.

MOBILITY IN SOIL
This material is a mobile liquid.

DEGRADABILITY
This product is nonbiodegradable.

ACCUMULATION
This product does not accumulate or biomagnify in the environment.

SECTION 13. DISPOSAL CONSIDERATIONS

Processing, use or contamination may change the waste management options.
Recycle / dispose of observing national, regional, state, provincial and local health, safety & pollution laws. If in doubt, contact appropriate agencies.

SECTION 14. TRANSPORT INFORMATION

DOT SHIPPING NAME: NONBULK: None
BULK: UN1268, Petroleum distillates, n.o.s., Combustible liquid, PG-III
Combustible liquid. Not DOT regulated on trucks in containers of < 119 gallons.
DRUM LABEL: None (Combustible Liquid)
IATA / ICAO: None
IMO / IMDG: None
EMERGENCY RESPONSE GUIDEBOOK NUMBER: 128

SECTION 15. REGULATORY INFORMATION

EPA REGULATION:
SARA SECTION 311/312 HAZARDS: Acute Health, Fire

All components of this product are on the TSCA list.
This material contains no known products restricted under SARA Title III, Section 313 in amounts greater or equal to 1%.

INTERNATIONAL REGULATIONS
The components of this product are listed on the chemical inventories of the following countries:
Australia (AICS), Canada (DSL, NDSL), China (IECSC), Europe (EINECS, ELINCS), Japan (METI/CSCL, MHLW/ISHL), South Korea (KECI), New Zealand (NZIoC), Philippines (PICCS), Switzerland (SWISS), Taiwan (NECSI), USA (TSCA).

CANADA: WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM (WHMIS)
B3: Combustible Liquid.
D2B: Irritating to skin / eyes.

SECTION 16. OTHER INFORMATION

HAZARD RATINGS:
HEALTH (NFPA): 1, HEALTH (HMIS): 1, FLAMMABILITY: 2, REACTIVITY: 0
(Personal Protection Rating to be supplied by user based on use conditions.)
This information is intended solely for the use of individuals trained in the NFPA & HMIS hazard rating systems.

EMPLOYEE TRAINING
See Section 2 for Risk & Safety Statements. Employees should be made aware of all hazards of this material (as stated in this SDS) before handling it.

NOTICE

The supplier disclaims all expressed or implied warranties of merchantability or fitness for a specific use, with respect to the product or the information provided herein, except for conformation to contracted specifications. All information appearing herein is based upon data obtained from manufacturers and/or recognized technical sources. While the information is believed to be accurate, we make no representations as to its accuracy or sufficiency.
Conditions of use are beyond our control, and therefore users are responsible for verifying the data under their own operating conditions to determine whether the product is suitable for their particular purposes and they assume all risks of their handling, and disposal of the product. Users also assume all risks in regards to the publication or use of, or reliance upon information contained herein.
This information relates only to the product designated herein, and does not relate to its use in combination with any other material or process.

Unless updated, the Safety Data Sheet is valid until 01/28/2015.

ATTACHMENT I

EMISSION UNITS TABLE

Attachment I

Emission Units Table

(includes all emission units and air pollution control devices that will be part of this permit application review, regardless of permitting status)

Emission Unit ID[1]	Emission Point ID[2]	Emission Unit Description	Year Installed/ Modified	Design Capacity	Type[3] and Date of Change	Control Device[4]
1S	1E	Paint Booth No. 1 with Heater	2015	Paint Gun 225 gr/min Heater 1.5126 MMBtu/hr	New	Filter
2S	2E	Paint Booth No. 2 with Heater	2015	Paint Gun 225 gr/min Heater 1.5126 MMBtu/hr	New	Filter
3S	3E	Paint Booth No. 3 with Heater	Future	Paint Gun 225 gr/min Heater 1.5126 MMBtu/hr	New	Filter
4S	4E	Body Prep Room	2015	NA	New	Filter
5S	5E	Inspection, Touchup, Cleaning, and Miscellaneous	2007	NA	Existing	NA
6S	6E	Welding	2007	NA	Existing	NA
7S	7E	Engine Emissions	2007	NA	Existing	NA
8S	8E	Parts Washers	2007	NA	Existing	NA
9S	9E	Emergency Generator	2014	40 HP	Existing	NA
10S	10E	Building Heaters	2007/2015	Btu/hr	Modification	NA
VA	VA	Vehicle Activity	2007	NA	Modification	NA
De Minimis		Diesel Tank	2007	5,000	NA	NA
De Minimis		Vehicle Fluid Storage Totes, Drums and Containers	2007	Various	NA	NA

[1] For Emission Units (or Sources) use the following numbering system: 1S, 2S, 3S, or other appropriate designation.
[2] For Emission Points use the following numbering system: 1E, 2E, 3E, or other appropriate designation.
[3] New, modification, removal
[4] For Control Devices use the following numbering system: 1C, 2C, 3C, or other appropriate designation.

ATTACHMENT J

EMISSION POINTS DATA SUMMARY SHEET

Attachment J
EMISSION POINTS DATA SUMMARY SHEET

Table 1: Emissions Data

Emission Point ID No. *(Must match Emission Units Table & Plot Plan)*	Emission Point Type[1]	Emission Unit Vented Through This Point *(Must match Emission Units Table & Plot Plan)*		Air Pollution Control Device *(Must match Emission Units Table & Plot Plan)*		Vent Time for Emission Unit *(chemical processes only)*		All Regulated Pollutants - Chemical Name/CAS[3] *(Speciate VOCs & HAPS)*	Maximum Potential Uncontrolled Emissions[4]		Maximum Potential Controlled Emissions[5]		Emission Form or Phase *(At exit conditions, Solid, Liquid or Gas/ Vapor)*	Est. Method Used[6]	Emission Concentration[7] (ppmv or mg/m^4)
		ID No.	Source	ID No.	Device Type	Short Term[2]	Max (hr/yr)		lb/hr	ton/yr	lb/hr	ton/yr			
1E	Vertical	1S	Paint Booth No. 1 with Heater	1C	Filter	NA	NA	VOC (Paint/Heat) PM/PM10/PM2.5 CO (Heat) NOX (Heat) SO_2 (Heat) Lead (Heat) HAPs (Paint/Heat)	16.00/0.01 9.89/0.01 0.12 0.15 0.01 0.000001 3.90/2.80E^{-3}	28.25/0.04 19.93/0.05 0.55 0.65 0.01 0.000003 2.62/1.22E^{-2}	16.00/0.01 0.10/0.01 0.12 0.15 0.01 0.000001 3.90/2.80E^{-3}	28.25/0.04 0.20/0.05 0.55 0.65 0.01 0.000003 2.62/1.22E^{-2}	Vapor Solid Gas Gas Gas Solid Vapor/Solid	Mass Balance and AP-42	NA
2E	Vertical	2S	Paint Booth No. 2 with Heater	2C	Filter	NA	NA	VOC (Paint/Heat) PM/PM10/PM2.5 CO (Heat) NOX (Heat) SO_2 (Heat) Lead (Heat) HAPs (Paint/Heat)	16.00/0.01 9.89/0.01 0.12 0.15 0.01 0.000001 3.90/2.80E^{-3}	*/0.04 */0.05 0.55 0.65 0.01 0.000003 */1.22E^{-2}	16.00/0.01 9.89/0.01 0.12 0.15 0.01 0.000001 3.90/2.80E^{-3}	*/0.04 19.93/0.05 0.55 0.65 0.01 0.000003 */1.22E^{-2}	Vapor Solid Gas Gas Gas Solid Vapor/Solid	Mass Balance and AP-42	NA
3E	Vertical	3S	Paint Booth No. 3 with Heater	3C	Filter	NA	NA	VOC (Paint/Heat) PM/PM10/PM2.5 CO (Heat) NOX (Heat) SO_2 (Heat) Lead (Heat) HAPs (Paint/Heat)	16.00/0.01 9.89/0.01 0.12 0.15 0.01 0.000001 3.90/2.80E^{-3}	*/0.04 */0.05 0.55 0.65 0.01 0.000003 */1.22E^{-2}	16.00/0.01 9.89/0.01 0.12 0.15 0.01 0.000001 3.90/2.80E^{-3}	*/0.04 */0.05 0.55 0.65 0.01 0.000003 */1.22E^{-2}	Vapor Solid Gas Gas Gas Solid Vapor/Solid	Mass Balance and AP-42	NA
*The yearly emissions for paint VOC, PM/PM10/PM2.5, and HAPs are combined and shown under Paint Booth No. 1 with Heater. These emissions may be from either of the three (3) paint booths.															
4E	Vents Inside Building	4S	Body Prep Room	4C	Filter	NA	NA	PM PM10 PM2.5	5.00 2.38 2.38	21.90 10.43 10.43	5.00 2.38 2.38	21.90 10.43 10.43	Solid Solid Solid	Reg. 7 Limit	NA
5E	NA	5S	Inspection, Touchups Cleaning, and Miscellaneous	NA	NA	NA	NA	VOC HAPs	5.28 1.59	7.54 2.26	5.28 1.59	7.54 2.26	Vapor Vapor	Mass Balance	NA
6E	NA	6S	Welding	NA	NA	NA	NA	PM/PM10/PM2.5 HAPs	0.08 0.298	0.02 0.0077	0.08 0.298	0.02 0.0077	Solid Vapor	AP-42	NA

Attachment J Continued
EMISSION POINTS DATA SUMMARY SHEET

Table 1: Emissions Data

Emission Point ID No. *(Must match Emission Units Table & Plot Plan)*	Emission Point Type[1]	Emission Unit Vented Through This Point *(Must match Emission Units Table & Plot Plan)*		Air Pollution Control Device *(Must match Emission Units Table & Plot Plan)*		Vent Time for Emission Unit *(chemical processes only)*		All Regulated Pollutants - Chemical Name/CAS[3] *(Speciate VOCs & HAPS)*	Maximum Potential Uncontrolled Emissions[4]		Maximum Potential Controlled Emissions[5]		Emission Form or Phase *(At exit conditions, Solid, Liquid or Gas/Vapor)*	Est. Method Used[6]	Emission Concentration[7] (ppmv or mg/m^4)
		ID No.	Source	ID No.	Device Type	Short Term[2]	Max (hr/yr)		lb/hr	ton/yr	lb/hr	ton/yr			
7E	NA	7S	Engine Emissions	NA	NA	NA	NA	VOC PM/PM10/PM2.5 CO NOX SO_2 HAPs	0.03 0.03 0.04 0.53 2.49 0.0322	0.09 0.09 0.12 1.56 7.35 0.0951	0.03 0.03 0.04 0.53 2.49 0.0322	0.09 0.09 0.12 1.56 7.35 0.0951	Vapor Solid Gas Gas Gas Vapor	AP-42 and Manufacturer EF	NA
8E	NA	8S	Parts Washer	NA	NA	NA	NA	VOC	0.15	0.66	0.13	0.57	Vapor	AP-42	NA
9E	Vertical	9S	Emergency Generator	NA	NA	NA	NA	VOC PM/PM10/PM2.5 CO NOX SO_2 HAPs	0.21 0.0031 8.93 0.19 0.0002 0.0109	0.0516 0.0008 2.23 0.05 0.0001 0.0029	0.21 0.0031 8.93 0.19 0.0002 0.0109	0.0516 0.0008 2.23 0.05 0.0001 0.0029	Vapor Solid Gas Gas Gas Vapor	AP-42 and Manufacturer EF	NA
10E	Vertical	10E	Building Heaters	NA	NA	NA	NA	VOC PM/PM10/PM2.5 CO NOX SO_2 Pb HAPs	0.10 0.14 1.51 1.81 0.02 0.000009 $3.40E^{-2}$	0.43 0.60 6.64 7.90 0.05 0.00004 $1.49E^{-2}$	0.10 0.14 1.51 1.81 0.02 0.000005 $3.40E^{-2}$	0.43 0.60 6.64 7.90 0.05 0.00004 $1.49E^{-2}$	Vapor Solid Gas Gas Gas Solid Vapor	AP-42	NA

The EMISSION POINTS DATA SUMMARY SHEET provides a summation of emissions by emission unit. Note that uncaptured process emission unit emissions are not typically considered to be fugitive and must be accounted for on the appropriate EMISSIONS UNIT DATA SHEET and on the EMISSION POINTS DATA SUMMARY SHEET. Please note that total emissions from the source are equal to all vented emissions, all fugitive emissions, plus all other emissions (e.g. uncaptured emissions). Please complete the FUGITIVE EMISSIONS DATA SUMMARY SHEET for fugitive emission activities.

[1] Please add descriptors such as upward vertical stack, downward vertical stack, horizontal stack, relief vent, rain cap, etc.

[2] Indicate by "C" if venting is continuous. Otherwise, specify the average short-term venting rate with units, for intermittent venting (ie., 15 min/hr). Indicate as many rates as needed to clarify frequency of venting (e.g., 5 min/day, 2 days/wk).

[3] List all regulated air pollutants. Speciate VOCs, including all HAPs. Follow chemical name with Chemical Abstracts Service (CAS) number. LIST Acids, CO, CS_2, VOCs, H_2S, Inorganics, Lead, Organics, O_3, NO, NO$_2$, SO_x, SO_2; all applicable Greenhouse Gases (including CO_2 and methane), etc. DO NOT LIST H_2, H_2O, N_2, O_2, and Noble Gases.

[4] Give maximum potential emission rate with no control equipment operating. If emissions occur for less than 1 hr, then record emissions per batch in minutes (e.g. 5 lb VOC/20 minute batch).

[5] Give maximum potential emission rate with proposed control equipment operating. If emissions occur for less than 1 hr, then record emissions per batch in minutes (e.g. 5 lb VOC/20 minute batch).

[6] Indicate method used to determine emission rate as follows: MB = material balance; ST = stack test (give date of test); EE = engineering estimate; O = other (specify).

[7] Provide for all pollutant emissions. Typically, the units of parts per million by volume (ppmv) are used. If the emission is a mineral acid (sulfuric, nitric, hydrochloric or phosphoric) use units of milligram per dry cubic meter (mg/m^3) at standard conditions (68 °F and 29.92 inches Hg) (see 45CSR7). If the pollutant is SO_2, use units of ppmv (see 45CSR10).

Attachment J
EMISSION POINTS DATA SUMMARY SHEET

Table 2: Release Parameter Data

Emission Point ID No. *(Must match Emission Units Table)*	Inner Diameter (ft.)	Exit Gas			Emission Point Elevation (ft)		UTM Coordinates (km)	
		Temp. (°F)	Volumetric Flow [1] (acfm) *at operating conditions*	Velocity (fps)	Ground Level *(Height above mean sea level)*	Stack Height [2] *(Release height of emissions above ground level)*	Northing	Easting
1E*	NA	Ambient	NA	NA	~626	~25 FT	4,360.59	459.52
2E*	NA	Ambient	NA	NA	~626	~25 FT		
3E*	NA	Ambient	NA	NA	~626	~25 FT		
4E*	NA	Ambient	NA	NA	~626	~25 FT		
5E*	NA	Ambient	NA	NA	~626	NA		
6E*	NA	Ambient	NA	NA	~626	NA		
7E*	NA	Ambient	NA	NA	~626	NA		
8E*	NA	Ambient	NA	NA	~626	NA		
9E*	NA	Ambient	NA	NA	~626	NA		
10E*	NA	Ambient	NA	NA	~626	NA		

[1] Give at operating conditions. Include inerts.
[2] Release height of emissions above ground level.
*See design details in the Appendix.

ATTACHMENT K

FUGITIVE EMISSIONS DATA SUMMARY SHEET

Attachment K

FUGITIVE EMISSIONS DATA SUMMARY SHEET

The FUGITIVE EMISSIONS SUMMARY SHEET provides a summation of fugitive emissions. Fugitive emissions are those emissions which could not reasonably pass through a stack, chimney, vent or other functionally equivalent opening. Note that uncaptured process emissions are not typically considered to be fugitive, and must be accounted for on the appropriate EMISSIONS UNIT DATA SHEET and on the EMISSION POINTS DATA SUMMARY SHEET.

Please note that total emissions from the source are equal to all vented emissions, all fugitive emissions, plus all other emissions (e.g. uncaptured emissions).

APPLICATION FORMS CHECKLIST - FUGITIVE EMISSIONS
1.) Will there be haul road activities? ☒ Yes ☐ No ☐ If YES, then complete the HAUL ROAD EMISSIONS UNIT DATA SHEET.
2.) Will there be Storage Piles? ☐ Yes ☒ No ☐ If YES, complete Table 1 of the NONMETALLIC MINERALS PROCESSING EMISSIONS UNIT DATA SHEET.
3.) Will there be Liquid Loading/Unloading Operations? ☐ Yes ☒ No ☐ If YES, complete the BULK LIQUID TRANSFER OPERATIONS EMISSIONS UNIT DATA SHEET.
4.) Will there be emissions of air pollutants from Wastewater Treatment Evaporation? ☐ Yes ☒ No ☐ If YES, complete the GENERAL EMISSIONS UNIT DATA SHEET.
5.) Will there be Equipment Leaks (e.g. leaks from pumps, compressors, in-line process valves, pressure relief devices, open-ended valves, sampling connections, flanges, agitators, cooling towers, etc.)? ☐ Yes ☒ No ☐ If YES, complete the LEAK SOURCE DATA SHEET section of the CHEMICAL PROCESSES EMISSIONS UNIT DATA SHEET.
6.) Will there be General Clean-up VOC Operations? ☐ Yes ☒ No ☐ If YES, complete the GENERAL EMISSIONS UNIT DATA SHEET.
7.) Will there be any other activities that generate fugitive emissions? ☐ Yes ☒ No ☐ If YES, complete the GENERAL EMISSIONS UNIT DATA SHEET or the most appropriate form.
If you answered "NO" to all of the items above, it is not necessary to complete the following table, "Fugitive Emissions Summary."

FUGITIVE EMISSIONS SUMMARY	All Regulated Pollutants - Chemical Name/CAS [1]	Maximum Potential Uncontrolled Emissions [2]		Maximum Potential Controlled Emissions [3]		Est. Method Used [4]
		lb/hr	ton/yr	lb/hr	ton/yr	
Haul Road/Road Dust Emissions Paved Haul Roads	PM PM10 PM2.5	4.28 0.86 0.24	5.93 1.20 0.33	4.28 0.86 0.24	5.93 1.20 0.33	AP-42
Unpaved Haul Roads	PM PM10 PM2.5	11.66 3.12 0.32	16.65 4.46 0.45	11.66 3.12 0.32	16.65 4.46 0.45	AP-42
Storage Pile Emissions						
Loading/Unloading Operations						
Wastewater Treatment Evaporation & Operations						
Equipment Leaks						
General Clean-up VOC Emissions						
Other						

[1] List all regulated air pollutants. Speciate VOCs, including all HAPs. Follow chemical name with Chemical Abstracts Service (CAS) number. LIST Acids, CO, CS_2, VOCs, H_2S, Inorganics, Lead, Organics, O_3, NO, NO_2, SO_2, SO_3, etc. DO NOT LIST CO_2, H_2, H_2O, N_2, O_2, and Noble Gases.
[2] Give rate with no control equipment operating. If emissions occur for less than 1 hr, then record emissions per batch in minutes (e.g. 5 lb VOC/20 minute batch).
[3] Give rate with proposed control equipment operating. If emissions occur for less than 1 hr, then record emissions per batch in minutes (e.g. 5 lb VOC/20 minute batch).
[4] Indicate method used to determine emission rate as follows: MB = material balance; ST = stack test (give date of test); EE = engineering estimate; O = other (specify).

ATTACHMENT L

EMISSION UNIT DATA SHEETS

Attachment L
EMISSIONS UNIT DATA SHEET
GENERAL

To be used for affected sources other than asphalt plants, foundries, incinerators, indirect heat exchangers, and quarries.

Identification Number (as assigned on *Equipment List Form*): 1S (1E), 2S (2E) and 3S (3E)

1. Name or type and model of proposed affected source:

   Paint Booth No. 1 with Heater – See Information in Appendix (Includes Paint Mix Booth)

2. On a separate sheet(s), furnish a sketch(es) of this affected source. If a modification is to be made to this source, clearly indicated the change(s). Provide a narrative description of all features of the affected source which may affect the production of air pollutants.

3. Name(s) and maximum amount of proposed process material(s) charged per hour:

   Paint Gun – 29.74 pounds per hour per booth
   Natural Gas Heater – 1.5126 MM Btu/hr per heater

4. Name(s) and maximum amount of proposed material(s) produced per hour:

   Painted Materials

5. Give chemical reactions, if applicable, that will be involved in the generation of air pollutants:

   None

* The identification number which appears here must correspond to the air pollution control device identification number appearing on the *List Form*.

6. Combustion Data (if applicable):

(a) Type and amount in appropriate units of fuel(s) to be burned:

Approximately 1.5126 MM Btu/hr per heater

(b) Chemical analysis of proposed fuel(s), excluding coal, including maximum percent sulfur and ash:

Pipeline Quality Natural Gas

(c) Theoretical combustion air requirement (ACF/unit of fuel): NA

@ °F and psia.

(d) Percent excess air:

(e) Type and BTU/hr of burners and all other firing equipment planned to be used:

1.5126 MM Btu/hr per heater

(f) If coal is proposed as a source of fuel, identify supplier and seams and give sizing of the coal as it will be fired:

NA

(g) Proposed maximum design heat input: 1.5126 × 10^6 BTU/hr.

7. Projected operating schedule:

Hours/Day	52	Days/Week	7	Weeks/Year	52

8. Projected amount of pollutants that would be emitted from this affected source if no control devices were used: Per Booth

@ Ambient °F and Ambient psia

a.	NO_X (Heat)	0.15	lb/hr	grains/ACF
b.	SO_2 (Heat)	0.01	lb/hr	grains/ACF
c.	CO (Heat)	0.12	lb/hr	grains/ACF
d.	PM_{10} (Paint/Heat)	9.89/0.01	lb/hr	grains/ACF
e.	Hydrocarbons		lb/hr	grains/ACF
f.	VOCs (Paint/Heat)	16.00/0.01	lb/hr	grains/ACF
g.	Pb (Heat)	0.000001	lb/hr	grains/ACF
h.	Specify other(s)			
	HAPs* (Paint/Heat)	3.90/2.80E^{-3}		
	*Speciated HAPs in Attachment N		lb/hr	grains/ACF
			lb/hr	grains/ACF
			lb/hr	grains/ACF

NOTE: (1) An Air Pollution Control Device Sheet must be completed for any air pollution device(s) used to control emissions from this affected source.

(2) Complete the Emission Points Data Sheet.

9. Proposed Monitoring, Recordkeeping, Reporting, and Testing
Please propose monitoring, recordkeeping, and reporting in order to demonstrate compliance with the proposed operating parameters. Please propose testing in order to demonstrate compliance with the proposed emissions limits.

MONITORING	RECORDKEEPING
Track the amount of paint used and VOC content.	Record the amount of paint used and VOC content.
REPORTING	**TESTING**
None	None

MONITORING. PLEASE LIST AND DESCRIBE THE PROCESS PARAMETERS AND RANGES THAT ARE PROPOSED TO BE MONITORED IN ORDER TO DEMONSTRATE COMPLIANCE WITH THE OPERATION OF THIS PROCESS EQUIPMENT OPERATION/AIR POLLUTION CONTROL DEVICE.

RECORDKEEPING. PLEASE DESCRIBE THE PROPOSED RECORDKEEPING THAT WILL ACCOMPANY THE MONITORING.

REPORTING. PLEASE DESCRIBE THE PROPOSED FREQUENCY OF REPORTING OF THE RECORDKEEPING.

TESTING. PLEASE DESCRIBE ANY PROPOSED EMISSIONS TESTING FOR THIS PROCESS EQUIPMENT/AIR POLLUTION CONTROL DEVICE.

10. Describe all operating ranges and maintenance procedures required by Manufacturer to maintain warranty

None Provided

Attachment L
EMISSIONS UNIT DATA SHEET
GENERAL

To be used for affected sources other than asphalt plants, foundries, incinerators, indirect heat exchangers, and quarries.

Identification Number (as assigned on *Equipment List Form*): 4S (4E)

1. Name or type and model of proposed affected source:

   Body Prep Room – See Information in Appendix

2. On a separate sheet(s), furnish a sketch(es) of this affected source. If a modification is to be made to this source, clearly indicated the change(s). Provide a narrative description of all features of the affected source which may affect the production of air pollutants.

3. Name(s) and maximum amount of proposed process material(s) charged per hour:

   Truck parts are prepared for painting/repainting with an estimated rate of 5,000 pounds per hour

4. Name(s) and maximum amount of proposed material(s) produced per hour:

   Prepared parts at 5,000 pounds per hour

5. Give chemical reactions, if applicable, that will be involved in the generation of air pollutants:

   None

* The identification number which appears here must correspond to the air pollution control device identification number appearing on the *List Form*.

6. Combustion Data (if applicable): NA

(a) Type and amount in appropriate units of fuel(s) to be burned:

(b) Chemical analysis of proposed fuel(s), excluding coal, including maximum percent sulfur and ash:

(c) Theoretical combustion air requirement (ACF/unit of fuel):

@ °F and psia.

(d) Percent excess air:

(e) Type and BTU/hr of burners and all other firing equipment planned to be used:

(f) If coal is proposed as a source of fuel, identify supplier and seams and give sizing of the coal as it will be fired:

(g) Proposed maximum design heat input: × 10^6 BTU/hr.

7. Projected operating schedule: Limited to 4,380 hours per year

Hours/Day	24	Days/Week	7	Weeks/Year	52

8. Projected amount of pollutants that would be emitted from this affected source if no control devices were used:

@ Ambient °F and Ambient psia

a.	NO_x		lb/hr	grains/ACF
b.	SO_2		lb/hr	grains/ACF
c.	CO		lb/hr	grains/ACF
d.	PM_{10}	2.38	lb/hr	grains/ACF
e.	Hydrocarbons		lb/hr	grains/ACF
f.	VOCs		lb/hr	grains/ACF
g.	Pb		lb/hr	grains/ACF
h.	Specify other(s)			
			lb/hr	
			lb/hr	grains/ACF
			lb/hr	grains/ACF
			lb/hr	grains/ACF

NOTE: (1) An Air Pollution Control Device Sheet must be completed for any air pollution device(s) used to control emissions from this affected source.

(2) Complete the Emission Points Data Sheet.

9. Proposed Monitoring, Recordkeeping, Reporting, and Testing
Please propose monitoring, recordkeeping, and reporting in order to demonstrate compliance with the proposed operating parameters. Please propose testing in order to demonstrate compliance with the proposed emissions limits.

MONITORING	RECORDKEEPING
None – the Body Prep Room vents back inside the building	None – the Body Prep Room vents back inside the building
REPORTING	**TESTING**
None – the Body Prep Room vents back inside the building	None – the Body Prep Room vents back inside the building

MONITORING. PLEASE LIST AND DESCRIBE THE PROCESS PARAMETERS AND RANGES THAT ARE PROPOSED TO BE MONITORED IN ORDER TO DEMONSTRATE COMPLIANCE WITH THE OPERATION OF THIS PROCESS EQUIPMENT OPERATION/AIR POLLUTION CONTROL DEVICE.

RECORDKEEPING. PLEASE DESCRIBE THE PROPOSED RECORDKEEPING THAT WILL ACCOMPANY THE MONITORING.

REPORTING. PLEASE DESCRIBE THE PROPOSED FREQUENCY OF REPORTING OF THE RECORDKEEPING.

TESTING. PLEASE DESCRIBE ANY PROPOSED EMISSIONS TESTING FOR THIS PROCESS EQUIPMENT/AIR POLLUTION CONTROL DEVICE.

10. Describe all operating ranges and maintenance procedures required by Manufacturer to maintain warranty
None

Attachment L
EMISSIONS UNIT DATA SHEET
GENERAL

To be used for affected sources other than asphalt plants, foundries, incinerators, indirect heat exchangers, and quarries.

Identification Number (as assigned on *Equipment List Form*): 5S (5E)

1. Name or type and model of proposed affected source:

   Inspection, Touchup, Cleaning, and Miscellaneous

2. On a separate sheet(s), furnish a sketch(es) of this affected source. If a modification is to be made to this source, clearly indicated the change(s). Provide a narrative description of all features of the affected source which may affect the production of air pollutants.

3. Name(s) and maximum amount of proposed process material(s) charged per hour:

   Various uses of materials throughout the site for spot repair of paint, cleaning, etc.

4. Name(s) and maximum amount of proposed material(s) produced per hour:

   NA

5. Give chemical reactions, if applicable, that will be involved in the generation of air pollutants:

   NA

* The identification number which appears here must correspond to the air pollution control device identification number appearing on the *List Form*.

6. Combustion Data (if applicable): NA

(a) Type and amount in appropriate units of fuel(s) to be burned:

(b) Chemical analysis of proposed fuel(s), excluding coal, including maximum percent sulfur and ash:

(c) Theoretical combustion air requirement (ACF/unit of fuel):

@ °F and psia.

(d) Percent excess air:

(e) Type and BTU/hr of burners and all other firing equipment planned to be used:

(f) If coal is proposed as a source of fuel, identify supplier and seams and give sizing of the coal as it will be fired:

(g) Proposed maximum design heat input: × 10^6 BTU/hr.

7. Projected operating schedule: Limited to 4,380 hours per year

Hours/Day	24	Days/Week	7	Weeks/Year	52

8. Projected amount of pollutants that would be emitted from this affected source if no control devices were used:			
@		°F and	psia
a. NO_X		lb/hr	grains/ACF
b. SO_2		lb/hr	grains/ACF
c. CO		lb/hr	grains/ACF
d. PM_{10}		lb/hr	grains/ACF
e. Hydrocarbons		lb/hr	grains/ACF
f. VOCs	5.28	lb/hr	grains/ACF
g. Pb		lb/hr	grains/ACF
h. Specify other(s)			
HAPs	1.59	lb/hr	
		lb/hr	grains/ACF
		lb/hr	grains/ACF
		lb/hr	grains/ACF

NOTE: (1) An Air Pollution Control Device Sheet must be completed for any air pollution device(s) used to control emissions from this affected source.

(2) Complete the Emission Points Data Sheet.

9. Proposed Monitoring, Recordkeeping, Reporting, and Testing
Please propose monitoring, recordkeeping, and reporting in order to demonstrate compliance with the proposed operating parameters. Please propose testing in order to demonstrate compliance with the proposed emissions limits.

MONITORING	RECORDKEEPING
Track the purchase of each identified material and the actual use of the paint products.	Record the purchase of each identified material and the actual use of the paint products.
REPORTING	**TESTING**
None	None

MONITORING. PLEASE LIST AND DESCRIBE THE PROCESS PARAMETERS AND RANGES THAT ARE PROPOSED TO BE MONITORED IN ORDER TO DEMONSTRATE COMPLIANCE WITH THE OPERATION OF THIS PROCESS EQUIPMENT OPERATION/AIR POLLUTION CONTROL DEVICE.

RECORDKEEPING. PLEASE DESCRIBE THE PROPOSED RECORDKEEPING THAT WILL ACCOMPANY THE MONITORING.

REPORTING. PLEASE DESCRIBE THE PROPOSED FREQUENCY OF REPORTING OF THE RECORDKEEPING.

TESTING. PLEASE DESCRIBE ANY PROPOSED EMISSIONS TESTING FOR THIS PROCESS EQUIPMENT/AIR POLLUTION CONTROL DEVICE.

10. Describe all operating ranges and maintenance procedures required by Manufacturer to maintain warranty

NA

Attachment L
EMISSIONS UNIT DATA SHEET
GENERAL

To be used for affected sources other than asphalt plants, foundries, incinerators, indirect heat exchangers, and quarries.

Identification Number (as assigned on *Equipment List Form*): 6S (6E)

1. Name or type and model of proposed affected source: Welding
2. On a separate sheet(s), furnish a sketch(es) of this affected source. If a modification is to be made to this source, clearly indicated the change(s). Provide a narrative description of all features of the affected source which may affect the production of air pollutants.
3. Name(s) and maximum amount of proposed process material(s) charged per hour: 1 pound per hour
4. Name(s) and maximum amount of proposed material(s) produced per hour: NA
5. Give chemical reactions, if applicable, that will be involved in the generation of air pollutants: NA

* The identification number which appears here must correspond to the air pollution control device identification number appearing on the *List Form*.

6. Combustion Data (if applicable): NA

(a) Type and amount in appropriate units of fuel(s) to be burned:

(b) Chemical analysis of proposed fuel(s), excluding coal, including maximum percent sulfur and ash:

(c) Theoretical combustion air requirement (ACF/unit of fuel):

@ °F and psia.

(d) Percent excess air:

(e) Type and BTU/hr of burners and all other firing equipment planned to be used:

(f) If coal is proposed as a source of fuel, identify supplier and seams and give sizing of the coal as it will be fired:

(g) Proposed maximum design heat input: × 10^6 BTU/hr.

7. Projected operating schedule:

Hours/Day	24	Days/Week	7	Weeks/Year	52

8. Projected amount of pollutants that would be emitted from this affected source if no control devices were used:

@ °F and psia

a. NO_X		lb/hr	grains/ACF
b. SO_2		lb/hr	grains/ACF
c. CO		lb/hr	grains/ACF
d. PM_{10}	0.08	lb/hr	grains/ACF
e. Hydrocarbons		lb/hr	grains/ACF
f. VOCs		lb/hr	grains/ACF
g. Pb		lb/hr	grains/ACF
h. Specify other(s)			
HAPs*	0.0298	lb/hr	grains/ACF
*Speciated HAPs in Attachment N.		lb/hr	grains/ACF
		lb/hr	grains/ACF
		lb/hr	grains/ACF

NOTE: (1) An Air Pollution Control Device Sheet must be completed for any air pollution device(s) used to control emissions from this affected source.

(2) Complete the Emission Points Data Sheet.

9. Proposed Monitoring, Recordkeeping, Reporting, and Testing
Please propose monitoring, recordkeeping, and reporting in order to demonstrate compliance with the proposed operating parameters. Please propose testing in order to demonstrate compliance with the proposed emissions limits.

MONITORING	RECORDKEEPING
Track the amount of welding wire purchased.	Record the amount of welding wire purchased.
REPORTING	**TESTING**
None	None

MONITORING. PLEASE LIST AND DESCRIBE THE PROCESS PARAMETERS AND RANGES THAT ARE PROPOSED TO BE MONITORED IN ORDER TO DEMONSTRATE COMPLIANCE WITH THE OPERATION OF THIS PROCESS EQUIPMENT OPERATION/AIR POLLUTION CONTROL DEVICE.

RECORDKEEPING. PLEASE DESCRIBE THE PROPOSED RECORDKEEPING THAT WILL ACCOMPANY THE MONITORING.

REPORTING. PLEASE DESCRIBE THE PROPOSED FREQUENCY OF REPORTING OF THE RECORDKEEPING.

TESTING. PLEASE DESCRIBE ANY PROPOSED EMISSIONS TESTING FOR THIS PROCESS EQUIPMENT/AIR POLLUTION CONTROL DEVICE.

10. Describe all operating ranges and maintenance procedures required by Manufacturer to maintain warranty

NA

Attachment L
EMISSIONS UNIT DATA SHEET
GENERAL

To be used for affected sources other than asphalt plants, foundries, incinerators, indirect heat exchangers, and quarries.

Identification Number (as assigned on *Equipment List Form*): 7S (7E)

1. Name or type and model of proposed affected source:

   Engine Emissions

2. On a separate sheet(s), furnish a sketch(es) of this affected source. If a modification is to be made to this source, clearly indicated the change(s). Provide a narrative description of all features of the affected source which may affect the production of air pollutants.

3. Name(s) and maximum amount of proposed process material(s) charged per hour:

   The engine emissions are for a 40 minute test time of an estimated 7 vehicles per hour inside the building. Once this test is complete, the vehicle is a mobile source and the emissions from the engines no longer count toward the PTE.

4. Name(s) and maximum amount of proposed material(s) produced per hour:

5. Give chemical reactions, if applicable, that will be involved in the generation of air pollutants:

* The identification number which appears here must correspond to the air pollution control device identification number appearing on the *List Form*.

6. Combustion Data (if applicable):

(a) Type and amount in appropriate units of fuel(s) to be burned:

Diesel Fuel

(b) Chemical analysis of proposed fuel(s), excluding coal, including maximum percent sulfur and ash:

Commercially available diesel fuels

(c) Theoretical combustion air requirement (ACF/unit of fuel): NA

@ °F and psia.

(d) Percent excess air: NA

(e) Type and BTU/hr of burners and all other firing equipment planned to be used:

NA - Engine

(f) If coal is proposed as a source of fuel, identify supplier and seams and give sizing of the coal as it will be fired:

NA

(g) Proposed maximum design heat input: NA $\times 10^6$ BTU/hr.

7. Projected operating schedule:

Hours/Day	24	Days/Week	7	Weeks/Year	52

8. Projected amount of pollutants that would be emitted from this affected source if no control devices were used:

@ Truck Exhaust °F and Ambient psia

a. NO_X	0.53	lb/hr	grains/ACF
b. SO_2	2.49	lb/hr	grains/ACF
c. CO	0.04	lb/hr	grains/ACF
d. PM_{10}	0.03	lb/hr	grains/ACF
e. Hydrocarbons		lb/hr	grains/ACF
f. VOCs	0.03	lb/hr	grains/ACF
g. Pb		lb/hr	grains/ACF
h. Specify other(s)			
HAPs*	0.0322	lb/hr	grains/ACF
*Speciated HAPs in Attachment N.		lb/hr	grains/ACF
		lb/hr	grains/ACF
		lb/hr	grains/ACF

NOTE: (1) An Air Pollution Control Device Sheet must be completed for any air pollution device(s) used to control emissions from this affected source.

(2) Complete the Emission Points Data Sheet.

9. Proposed Monitoring, Recordkeeping, Reporting, and Testing
Please propose monitoring, recordkeeping, and reporting in order to demonstrate compliance with the proposed operating parameters. Please propose testing in order to demonstrate compliance with the proposed emissions limits.

MONITORING	RECORDKEEPING
Track the number of trucks assembled per year.	Record the number of trucks assembled per year.
REPORTING	**TESTING**
None	None

MONITORING. PLEASE LIST AND DESCRIBE THE PROCESS PARAMETERS AND RANGES THAT ARE PROPOSED TO BE MONITORED IN ORDER TO DEMONSTRATE COMPLIANCE WITH THE OPERATION OF THIS PROCESS EQUIPMENT OPERATION/AIR POLLUTION CONTROL DEVICE.

RECORDKEEPING. PLEASE DESCRIBE THE PROPOSED RECORDKEEPING THAT WILL ACCOMPANY THE MONITORING.

REPORTING. PLEASE DESCRIBE THE PROPOSED FREQUENCY OF REPORTING OF THE RECORDKEEPING.

TESTING. PLEASE DESCRIBE ANY PROPOSED EMISSIONS TESTING FOR THIS PROCESS EQUIPMENT/AIR POLLUTION CONTROL DEVICE.

10. Describe all operating ranges and maintenance procedures required by Manufacturer to maintain warranty

NA

Attachment L
EMISSIONS UNIT DATA SHEET
GENERAL

To be used for affected sources other than asphalt plants, foundries, incinerators, indirect heat exchangers, and quarries.

Identification Number (as assigned on *Equipment List Form*): 8S (8E)

1. Name or type and model of proposed affected source:

Parts Washers

2. On a separate sheet(s), furnish a sketch(es) of this affected source. If a modification is to be made to this source, clearly indicated the change(s). Provide a narrative description of all features of the affected source which may affect the production of air pollutants.

3. Name(s) and maximum amount of proposed process material(s) charged per hour:

This source is two parts washers which are refreshed as needed.

4. Name(s) and maximum amount of proposed material(s) produced per hour:

None

5. Give chemical reactions, if applicable, that will be involved in the generation of air pollutants:

NA

* The identification number which appears here must correspond to the air pollution control device identification number appearing on the *List Form*.

6. Combustion Data (if applicable): NA

(a) Type and amount in appropriate units of fuel(s) to be burned:

(b) Chemical analysis of proposed fuel(s), excluding coal, including maximum percent sulfur and ash:

(c) Theoretical combustion air requirement (ACF/unit of fuel):

@ °F and psia.

(d) Percent excess air:

(e) Type and BTU/hr of burners and all other firing equipment planned to be used:

(f) If coal is proposed as a source of fuel, identify supplier and seams and give sizing of the coal as it will be fired:

(g) Proposed maximum design heat input: × 10^6 BTU/hr.

7. Projected operating schedule:

Hours/Day	24	Days/Week	7	Weeks/Year	52

8. Projected amount of pollutants that would be emitted from this affected source if no control devices were used:

@ °F and psia

a.	NO_X	lb/hr	grains/ACF
b.	SO_2	lb/hr	grains/ACF
c.	CO	lb/hr	grains/ACF
d.	PM_{10}	lb/hr	grains/ACF
e.	Hydrocarbons	lb/hr	grains/ACF
f.	VOCs	0.15 lb/hr	grains/ACF
g.	Pb	lb/hr	grains/ACF
h.	Specify other(s)		
		lb/hr	grains/ACF
		lb/hr	grains/ACF
		lb/hr	grains/ACF
		lb/hr	grains/ACF

NOTE: (1) An Air Pollution Control Device Sheet must be completed for any air pollution device(s) used to control emissions from this affected source.

(2) Complete the Emission Points Data Sheet.

9. Proposed Monitoring, Recordkeeping, Reporting, and Testing
Please propose monitoring, recordkeeping, and reporting in order to demonstrate compliance with the proposed operating parameters. Please propose testing in order to demonstrate compliance with the proposed emissions limits.

MONITORING	RECORDKEEPING
None	None
REPORTING	**TESTING**
None	None

MONITORING. PLEASE LIST AND DESCRIBE THE PROCESS PARAMETERS AND RANGES THAT ARE PROPOSED TO BE MONITORED IN ORDER TO DEMONSTRATE COMPLIANCE WITH THE OPERATION OF THIS PROCESS EQUIPMENT OPERATION/AIR POLLUTION CONTROL DEVICE.

RECORDKEEPING. PLEASE DESCRIBE THE PROPOSED RECORDKEEPING THAT WILL ACCOMPANY THE MONITORING.

REPORTING. PLEASE DESCRIBE THE PROPOSED FREQUENCY OF REPORTING OF THE RECORDKEEPING.

TESTING. PLEASE DESCRIBE ANY PROPOSED EMISSIONS TESTING FOR THIS PROCESS EQUIPMENT/AIR POLLUTION CONTROL DEVICE.

10. Describe all operating ranges and maintenance procedures required by Manufacturer to maintain warranty

NA

Attachment L
EMISSIONS UNIT DATA SHEET
GENERAL

To be used for affected sources other than asphalt plants, foundries, incinerators, indirect heat exchangers, and quarries.

Identification Number (as assigned on *Equipment List Form*): 9S (9E)

1. Name or type and model of proposed affected source:

   Emergency Generator -- See Information in Appendix

2. On a separate sheet(s), furnish a sketch(es) of this affected source. If a modification is to be made to this source, clearly indicated the change(s). Provide a narrative description of all features of the affected source which may affect the production of air pollutants.

3. Name(s) and maximum amount of proposed process material(s) charged per hour:

   This source is the 40 horsepower engine on the emergency generator.

4. Name(s) and maximum amount of proposed material(s) produced per hour:

   NA

5. Give chemical reactions, if applicable, that will be involved in the generation of air pollutants:

   NA

* The identification number which appears here must correspond to the air pollution control device identification number appearing on the *List Form*.

6. Combustion Data (if applicable):

(a) Type and amount in appropriate units of fuel(s) to be burned:

316 cu ft/hr

(b) Chemical analysis of proposed fuel(s), excluding coal, including maximum percent sulfur and ash:

Pipeline Quality Natural Gas

(c) Theoretical combustion air requirement (ACF/unit of fuel): NA

@ °F and psia.

(d) Percent excess air: NA

(e) Type and BTU/hr of burners and all other firing equipment planned to be used:

NA

(f) If coal is proposed as a source of fuel, identify supplier and seams and give sizing of the coal as it will be fired:

NA

(g) Proposed maximum design heat input: ~0.32 × 10^6 BTU/hr.

7. Projected operating schedule: Limited to 500 Hours Per Year

Hours/Day	24	Days/Week	7	Weeks/Year	52

8. Projected amount of pollutants that would be emitted from this affected source if no control devices were used:

@ Engine Exhaust °F and Ambient psia

a. NO_X	0.19	lb/hr	grains/ACF
b. SO_2	0.0002	lb/hr	grains/ACF
c. CO	8.93	lb/hr	grains/ACF
d. PM_{10}	0.0031	lb/hr	grains/ACF
e. Hydrocarbons		lb/hr	grains/ACF
f. VOCs	0.21	lb/hr	grains/ACF
g. Pb		lb/hr	grains/ACF
h. Specify other(s)			
HAPs*	0.0109	lb/hr	grains/ACF
*Speciated HAPs shown in Attachment N.		lb/hr	grains/ACF
		lb/hr	grains/ACF
		lb/hr	grains/ACF

NOTE: (1) An Air Pollution Control Device Sheet must be completed for any air pollution device(s) used to control emissions from this affected source.

(2) Complete the Emission Points Data Sheet.

9. Proposed Monitoring, Recordkeeping, Reporting, and Testing
Please propose monitoring, recordkeeping, and reporting in order to demonstrate compliance with the proposed operating parameters. Please propose testing in order to demonstrate compliance with the proposed emissions limits.

MONITORING	RECORDKEEPING
Track run time.	Record run time.
REPORTING	**TESTING**
None	None

MONITORING. PLEASE LIST AND DESCRIBE THE PROCESS PARAMETERS AND RANGES THAT ARE PROPOSED TO BE MONITORED IN ORDER TO DEMONSTRATE COMPLIANCE WITH THE OPERATION OF THIS PROCESS EQUIPMENT OPERATION/AIR POLLUTION CONTROL DEVICE.

RECORDKEEPING. PLEASE DESCRIBE THE PROPOSED RECORDKEEPING THAT WILL ACCOMPANY THE MONITORING.

REPORTING. PLEASE DESCRIBE THE PROPOSED FREQUENCY OF REPORTING OF THE RECORDKEEPING.

TESTING. PLEASE DESCRIBE ANY PROPOSED EMISSIONS TESTING FOR THIS PROCESS EQUIPMENT/AIR POLLUTION CONTROL DEVICE.

10. Describe all operating ranges and maintenance procedures required by Manufacturer to maintain warranty

NA

EMISSIONS UNIT DATA SHEET
GENERAL

To be used for affected sources other than asphalt plants, foundries, incinerators, indirect heat exchangers, and quarries.

Identification Number (as assigned on *Equipment List Form*): 10S (10E)

1. Name or type and model of proposed affected source:

   Building Heaters (multiple heaters)

2. On a separate sheet(s), furnish a sketch(es) of this affected source. If a modification is to be made to this source, clearly indicated the change(s). Provide a narrative description of all features of the affected source which may affect the production of air pollutants.

3. Name(s) and maximum amount of proposed process material(s) charged per hour:

   This emission unit is for the natural gas fired building heaters with a total heat input of 18.41 MM Btu/hr.

4. Name(s) and maximum amount of proposed material(s) produced per hour:

   None

5. Give chemical reactions, if applicable, that will be involved in the generation of air pollutants:

   NA

* The identification number which appears here must correspond to the air pollution control device identification number appearing on the *List Form*.

6. Combustion Data (if applicable):

(a) Type and amount in appropriate units of fuel(s) to be burned:

Natural gas at a total of 18.41 MM Btu/hr.

(b) Chemical analysis of proposed fuel(s), excluding coal, including maximum percent sulfur and ash:

Pipeline Quality Natural Gas

(c) Theoretical combustion air requirement (ACF/unit of fuel): NA

@ °F and psia.

(d) Percent excess air: NA

(e) Type and BTU/hr of burners and all other firing equipment planned to be used:

Various

(f) If coal is proposed as a source of fuel, identify supplier and seams and give sizing of the coal as it will be fired:

NA

(g) Proposed maximum design heat input: 18.41 × 10^6 BTU/hr.

7. Projected operating schedule:

Hours/Day	24	Days/Week	7	Weeks/Year	52

8. Projected amount of pollutants that would be emitted from this affected source if no control devices were used:

@ °F and psia

a. NO_X	1.8	lb/hr	grains/ACF
b. SO_2	0.02	lb/hr	grains/ACF
c. CO	1.51	lb/hr	grains/ACF
d. PM_{10}	0.14	lb/hr	grains/ACF
e. Hydrocarbons		lb/hr	grains/ACF
f. VOCs	0.10	lb/hr	grains/ACF
g. Pb	0.000009	lb/hr	grains/ACF
h. Specify other(s)			
HAPs*	$3.40E^{-2}$	lb/hr	
*Speciated HAPs shown in Attachment N.		lb/hr	grains/ACF
		lb/hr	grains/ACF
		lb/hr	grains/ACF

NOTE: (1) An Air Pollution Control Device Sheet must be completed for any air pollution device(s) used to control emissions from this affected source.

(2) Complete the Emission Points Data Sheet.

9. Proposed Monitoring, Recordkeeping, Reporting, and Testing
Please propose monitoring, recordkeeping, and reporting in order to demonstrate compliance with the proposed operating parameters. Please propose testing in order to demonstrate compliance with the proposed emissions limits.

MONITORING	RECORDKEEPING
None	None
REPORTING	**TESTING**
None	None

MONITORING. PLEASE LIST AND DESCRIBE THE PROCESS PARAMETERS AND RANGES THAT ARE PROPOSED TO BE MONITORED IN ORDER TO DEMONSTRATE COMPLIANCE WITH THE OPERATION OF THIS PROCESS EQUIPMENT OPERATION/AIR POLLUTION CONTROL DEVICE.

RECORDKEEPING. PLEASE DESCRIBE THE PROPOSED RECORDKEEPING THAT WILL ACCOMPANY THE MONITORING.

REPORTING. PLEASE DESCRIBE THE PROPOSED FREQUENCY OF REPORTING OF THE RECORDKEEPING.

TESTING. PLEASE DESCRIBE ANY PROPOSED EMISSIONS TESTING FOR THIS PROCESS EQUIPMENT/AIR POLLUTION CONTROL DEVICE.

10. Describe all operating ranges and maintenance procedures required by Manufacturer to maintain warranty

None

Attachment L
FUGITIVE EMISSIONS FROM UNPAVED HAULROADS

UNPAVED HAULROADS (including all equipment traffic involved in process, haul trucks, endloaders, etc.)

		PM	PM-10
k =	Particle size multiplier	4.9	1.5
s =	Silt content of road surface material (%)	6	6
p =	Number of days per year with precipitation >0.01 in.	150	150

Item Number	Description	Number of Wheels	Mean Vehicle Weight (tons)	Mean Vehicle Speed (mph)	Miles per Trip	Maximum Trips per Hour	Maximum Trips per Year	Control Device ID Number	Control Efficiency (%)
1	Plant to Gravel Area	6	16.5	15	0.15	7	20,000	NA	0
2	Leaving Site	6	16.5	15	0.15	7	20,000	NA	0
3									
4									
5									
6									
7									
8									

Source: *AP-42 Fifth Edition – 13.2.2 Unpaved Roads*

$E = k \times 5.9 \times (s \div 12) \times (W \div 3)^{0.7} \times ((365 - p) \div 365) =$ lb/Vehicle Mile Traveled (VMT)

Where:

		PM	PM-10
k =	Particle size multiplier	4.9	1.5
s =	Silt content of road surface material (%)	6	6
S =	Mean vehicle speed (mph)	15	15
W =	Mean vehicle weight (tons)	16.5	16.5
w =	Mean number of wheels per vehicle	6	6
p =	Number of days per year with precipitation >0.01 in.	157	157

For lb/hr: [lb ÷ VMT] × [VMT ÷ trip] × [Trips ÷ Hour] = lb/hr

For TPY: [lb ÷ VMT] × [VMT ÷ trip] × [Trips ÷ Hour] × [Ton ÷ 2000 lb] = Tons/year

SUMMARY OF UNPAVED HAULROAD EMISSIONS

Item No.	PM				PM-10			
	Uncontrolled		Controlled		Uncontrolled		Controlled	
	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
1	3.89	5.55	3.89	5.55	1.04	1.49	1.04	1.49
2	7.77	11.10	7.77	11.10	2.08	2.97	2.08	2.97
3								
4								
5								
	Note: Item No.2 is double counting of raw coal trucking emissions and is not included in the total below.							
TOTALS	11.66	16.65	11.66	16.65	3.12	4.46	3.12	4.46

FUGITIVE EMISSIONS FROM PAVED HAULROADS - NA

INDUSTRIAL PAVED HAULROADS (including all equipment traffic involved in process, haul trucks, endloaders, etc.)

I =	Industrial augmentation factor (dimensionless)	
n =	Number of traffic lanes	
s =	Surface material silt content (%)	
L =	Surface dust loading (lb/mile)	

Item Number	Description	Mean Vehicle Weight (tons)	Miles per Trip	Maximum Trips per Hour	Maximum Trips per Year	Control Device ID Number	Control Efficiency (%)
1	Finished Trucks to Parking	16.5	0.55	7	20,000	NA	0
2	Delivery	40.0	0.55	4	10,950	NA	0
3							
4							
5							
6							
7							
8							

Source: *AP-42 Fifth Edition – ~~11.2.6~~* 13.2.1.3 *Industrial Paved Roads*

$E = 0.077 \times I \times (4 \div n) \times (s \div 10) \times (L \div 1000) \times (W \div 3)^{0.7}$ = lb/Vehicle Mile Traveled (VMT)

Where:

I =	Industrial augmentation factor (dimensionless)	
n =	Number of traffic lanes	
s =	Surface material silt content (%)	
L =	Surface dust loading (lb/mile)	
W =	Average vehicle weight (tons)	

For lb/hr: [lb ÷ VMT] × [VMT ÷ trip] × [Trips ÷ Hour] = lb/hr

For TPY: [lb ÷ VMT] × [VMT ÷ trip] × [Trips ÷ Hour] × [Ton ÷ 2000 lb] = Tons/year

SUMMARY OF PAVED HAULROAD EMISSIONS (PM)

Item No.	Uncontrolled		Controlled	
	lb/hr	TPY	lb/hr	TPY
1	1.35	1.93	1.35	1.93
2	2.93	4.00	2.93	4.00
3				
4				
5				
6				
7				
8				
TOTALS	4.28	5.93	4.28	5.93

ATTACHMENT M

AIR POLLUTION CONTROL DEVICE SHEETS

Air Pollution Control Device Sheet

(OTHER COLLECTORS)Control Device ID No. (must match List Form):

Equipment Information

1. Manufacturer: Global (or Equivalent) Model No. NA	2. Control Device Name: FF Type: Fabric Filter
3. Provide diagram(s) of unit describing capture system with duct arrangement and size of duct, air volume, capacity, horsepower of movers. If applicable, state hood face velocity and hood collection efficiency.	
4. On a separate sheet(s) supply all data and calculations used in selecting or designing this collection device.	
5. Provide a scale diagram of the control device showing internal construction.	
6. Submit a schematic and diagram with dimensions and flow rates.	
7. Guaranteed minimum collection efficiency for each pollutant collected:	
8. Attached efficiency curve and/or other efficiency information.	
9. Design inlet volume SCFM	10. Capacity:
11. Indicate the liquid flow rate and describe equipment provided to measure pressure drop and flow rate, if any.	
12. Attach any additional data including auxiliary equipment and operation details to thoroughly evaluate the control equipment.	
13. Description of method of handling the collected material(s) for reuse of disposal.	

Gas Stream Characteristics

14. Are halogenated organics present?	☒ Yes	☐ No
Are particulates present?	☒ Yes	☐ No
Are metals present?	☒ Yes	☐ No

15. Inlet Emission stream parameters:	Maximum	Typical
Pressure (mmHg):	NA	
Heat Content (BTU/scf):		
Oxygen Content (%):		
Moisture Content (%):		
Relative Humidity (%):		

16. Type of pollutant(s) controlled:	☐ SO_x	☐ Odor
☒ Particulate (type):		☐ Other

17. Inlet gas velocity: NA ft/min	18. Pollutant specific gravity: Varies
19. Gas flow into the collector: Variable	20. Gas stream temperature: Ambient Inlet: °F Outlet: °F
21. Gas flow rate: Design Maximum: ACFM Average Expected: ACFM	22. Particulate Grain Loading in grains/scf: Inlet: Outlet:

23. Emission rate of each pollutant (specify) into and out of collector:

Pollutant	IN Pollutant		Emission Capture Efficiency %	OUT Pollutant		Control Efficiency %
	lb/hr	grains/acf		lb/hr	grains/acf	
PM/ PM10/PM2.5	9.89		100	0.10		99
D						
E						

24. Dimensions of stack: Height Diameter ft.

25. Supply a curve showing proposed collection efficiency versus gas volume from 25 to 130 percent of design rating of collector.

Particulate Distribution

26. Complete the table:	Particle Size Distribution at Inlet to Collector	Fraction Efficiency of Collector
Particulate Size Range (microns)	Weight % for Size Range	Weight % for Size Range
0 – 2		
2 – 4		99
4 – 6		
6 – 8		
8 – 10		
10 – 12		
12 – 16		
16 – 20		
20 – 30		
30 – 40		
40 – 50		
50 – 60		
60 – 70		
70 – 80		
80 – 90		
90 – 100		
>100		

27. Describe any air pollution control device inlet and outlet gas conditioning processes (e.g., gas cooling, gas reheating, gas humidification): Ambient

28. Describe the collection material disposal system: Filters are landfilled.

29. Have you included ***Other Collectores Control Device*** in the Emissions Points Data Summary Sheet?

30. **Proposed Monitoring, Recordkeeping, Reporting, and Testing**
Please propose monitoring, recordkeeping, and reporting in order to demonstrate compliance with the proposed operating parameters. Please propose testing in order to demonstrate compliance with the proposed emissions limits.

MONITORING:	RECORDKEEPING:
Track when the filters are replaced.	Record when the filters are replaced.
REPORTING:	**TESTING:**
None	None

MONITORING:	Please list and describe the process parameters and ranges that are proposed to be monitored in order to demonstrate compliance with the operation of this process equipment or air control device.
RECORDKEEPING:	Please describe the proposed recordkeeping that will accompany the monitoring.
REPORTING:	Please describe any proposed emissions testing for this process equipment on air pollution control device.
TESTING:	Please describe any proposed emissions testing for this process equipment on air pollution control device.

31. Manufacturer's Guaranteed Control Efficiency for each air pollutant. 99

32. Manufacturer's Guaranteed Control Efficiency for each air pollutant. 99

33. Describe all operating ranges and maintenance procedures required by Manufacturer to maintain warranty.
Use as required in the paint booth.

ATTACHMENT N

SUPPORTING EMISSIONS CALCULATIONS

By: PEW
Date: 05/19/2015

Checked by: LKB
Date: 05/21/2015

Facility Summary

Criteria Pollutant	Total Emissions			
	Uncontrolled		Controlled	
	lb/hour	ton/yr	lb/hour	ton/yr
VOC	53.80	37.14	53.78	37.05
PM	50.90	65.27	21.52	45.54
PM_{10}	36.32	36.88	6.94	17.15
$PM_{2.5}$	32.90	32.00	3.52	12.27
NO_X	2.98	11.46	2.98	11.46
CO	10.84	10.64	10.84	10.64
SO_2	2.54	7.43	2.54	7.43
Total HAPs	13.39	5.17	13.39	5.17
Lead	0.000011	0.000049	0.000011	0.000049

By: PEW
Date: 05/19/2015

Checked by: LKB
Date: 05/21/2015

Paint Booths (1S, 2S, & 3S)

There are three identical paint booths proposed for this facility. To estimate the hourly emissions the Regulation 21, Section 19, limitations are being utilized. The paint and primer meet the definition of air dried coatings with a VOC limits of 3.5 pounds per gallon. The clear coat has a limit of 4.3 pounds per gallon. Therefore, for the maximum hourly VOC emissions it is assumed that the operation will use clear coat for one hour. The maximum hourly particulate emissions (PM, PM10, and PM2.5 assumed to be equal) are based on the highest solids coating being utilized for the entire hour. Maximum HAP emissions are based on the percent by weights of the HAPS present in the materials, the gallons per hour capacity of the paint gun, and the unit weight of the specific material. It is assumed that the material is used for an entire hour and the highest HAP value is requested to be the emissions value.

Paint Gun Capability

Paint Gun Theoretical Throughput =	225	gr/min (Dan-Am Co. SATA Distributor USA)
	454	gr/lb
	60	min/hr
	29.74	pph

Hourly Emissions Estimate

Volatile Organic Compounds

Minimum Weight Per Gallon of Paint =	7.99	ppg (Imron Elite Appearance Clear Coat (8430S)
Maximum Gallons =	3.72	gph
VOC Content =	4.3	ppg (Regulation 21, Section 19 Limit)
VOC Emissions =	16.00	pph

Particulate Matter (PM, PM10, and PM2.5 Assumed Equal)

Maximum Solids Content =	7.59	ppg (Color Atlas White (CAS992))
Usage Rate of Solids =	28.26	pph
Transfer Efficiency of Solids =	65	%
Uncontrolled PM/PM10/PM2.5 Emissions =	9.89	pph
Control Efficiency =	99	%
Controlled PM/PM10/PM2.5 Emissions =	0.10	pph

By: PEW
Date: 05/19/2015

Checked by: LKB
Date: 05/21/2015

Hourly Emissions Estimate (Continued)

Hazardous Air Pollutants

Paint

Weight =	8.55 ppg (Color Atlas Yellow (CAS250))	
Ethylbenzene =	0.1 %	0.03 pph

Primers

Weight =	12.28 ppg (Gray Hybrid Epoxy Primer (825P32760))	
Xylene =	2 %	0.91 pph
Ethylbenzene =	0.4 %	0.18 pph
Naphthalene =	0.3 %	0.14 pph
Weight =	10.82 ppg (Gray Urethane Sandable Primer (1220S))	
Ethylene Glycol Monobutyl Ether Acetate =	6 %	2.42 pph
Weight =	7.37 ppg (Hybrid Primer Medium Activator (FGP32765))	
Xylene =	4 %	1.10 pph
Ethylbenzene =	0.9 %	0.25 pph

Total Hourly Emissions

	One Booth		Three Booths		
	Uncontrolled	Controlled	Uncontrolled	Controlled	
VOC	16.00	16.00	48.01	48.01	pph
PM/PM10/PM2.5	9.89	0.10	29.67	0.30	pph
Xylene	1.10	1.10	3.29	3.29	pph
Ethylbenzene	0.25	0.25	0.74	0.74	pph
Naphthalene	0.14	0.14	0.41	0.41	pph
Ethylene Glycol Monobutyl Ether Acetate	2.42	2.42	7.25	7.25	pph
Total HAPS	3.90	3.90	11.69	11.69	pph

By: PEW
Date: 05/19/2015

Checked by: LKB
Date: 05/21/2015

Yearly Emissions Estimate

A mass balance is used for the yearly emissions with the required coating usages for each truck being painted. It is estimated that each truck will take one gallon each of primer, paint, and clear coat. The total estimated coating usage is based on the total number of trucks to be painted. For total particulate from painting it is assumed that all the coatings have the highest solids presented as in the hourly emissions estimate. Maximum HAP emissions are based on the weight percents of the HAPS present in the materials, the gallons per year use of each material, and the unit weight of the specific material. It is assumed that the material is used for an entire hour and the highest HAP value is requested to be the emissions value.

Number of Trucks Painted =	5,000	trucks per year

Volatile Organic Compounds

Clear Coat

Application Rate Per Truck =	1	gallon per truck
Total Amount Used =	5,000	gpy
VOC Content =	4.3	ppg (Regulation 21, Section 19 Limit)
VOC Emissions =	21,500	ppy
	10.75	tpy

Paint

Application Rate Per Truck =	1	gallon per truck
Total Amount Used =	5,000	gpy
VOC Content =	3.5	ppg (Regulation 21, Section 19 Limit)
VOC Emissions =	17,500	ppy
	8.75	tpy

Primer

Application Rate Per Truck =	1	gallon per truck
Total Amount Used =	5,000	gpy
VOC Content =	3.5	ppg (Regulation 21, Section 19 Limit)
VOC Emissions =	17,500	ppy
	8.75	tpy
Total VOC Emissions =	28.25	tpy

Particulate Matter (PM, PM10, and PM2.5 Assumed Equal)

Maximum Solids Content =	7.59	ppg (Color Atlas White (CAS992))
Total Coating =	15,000	gpy
Usage Rate of Solids =	113,903	ppy
Transfer Efficiency of Solids =	65	%
Uncontrolled PM/PM10/PM2.5 Emissions =	39,865.93	ppy
	19.93	tpy
Control Efficiency =	99	%
Controlled PM/PM10/PM2.5 Emissions =	398.66	ppy
	0.20	tpy

Yearly Emissions Estimate (Continued)

Hazardous Air Pollutants

Paint

Weight =	8.55 ppg (Color Atlas Yellow (CAS250))	
Ethylbenzene =	0.1 %	0.02 tpy

Primers

Weight =	12.28 ppg (Gray Hybrid Epoxy Primer (825P32760))	
Xylene =	2 %	0.61 tpy
Ethylbenzene =	0.4 %	0.12 tpy
Naphthalene =	0.3 %	0.09 tpy
Weight =	10.82 ppg (Gray Urethane Sandable Primer (1220S))	
Ethylene Glycol Monobutyl Ether Acetate =	6 %	1.62 tpy
Weight =	7.37 ppg (Hybrid Primer Medium Activator (FGP32765))	
Xylene =	4 %	0.74 tpy
Ethylbenzene =	0.9 %	0.17 tpy

Maximum Emissions for HAPS

Xylene =	0.74 tpy
Ethylbenzene =	0.17 tpy
Naphthalene =	0.09 tpy
Ethylene Glycol Monobutyl Ether Acetate =	1.62 tpy
Total =	2.62 tpy

Paint Booth Heaters (1S, 2S, & 3S)

There are three identical paint booths proposed for the site each with the same heating unit and each are fueled with natural gas.

Paint Booth Heater =	1,512,600	Btu/hr
	1.5126	MMBtu/hr
Operating Hours =	8,760	hrs/yr
Number of Units =	3	

Emission Type	EF[a] lb/10^6 scf	EF[a] lb/MMBtu	One Unit Emissions lb/hr	One Unit Emissions tons/year
CO	84	0.08235	0.12	0.55
NO_X	100	0.09804	0.15	0.65
PM	7.6	0.00745	0.01	0.05
PM_{10}[1]	7.6	0.00745	0.01	0.05
$PM_{2.5}$[1]	7.6	0.00745	0.01	0.05
SO_2	0.6	0.00059	0.01	0.01
VOC/TOC	5.5	0.00539	0.01	0.04
Lead	0.0005	4.90E-07	0.000001	0.000003

Rounding to = 2

Emission Type	Three Units Emissions lb/hr	Three Units Emissions tons/year
CO	0.36	1.65
NO_X	0.45	1.95
PM	0.03	0.15
PM_{10}[1]	0.03	0.15
$PM_{2.5}$[1]	0.03	0.15
SO_2	0.03	0.03
VOC/TOC	0.03	0.12
Lead	2.22E-06	9.74E-06

Conversion from lb/10^6 scf to lb/MMBtu (divide by) = 1,020

References:
a. Emission factors from AP-42, 1.4, Natural Gas Combustion, 7/98.

Note:
1. It is assumed that PM10 and PM2.5 are equal to PM.

By: PEW
Date: 05/19/2015

Checked by: LKB
Date: 05.21/2015

Paint Booth Heaters (1S, 2S, & 3S)

Total Heaters Rating =	1.5126	MMBtu/hr
Operating Hours =	8,760	hrs/yr

CAS No.	Hazardous Air Pollutants	EF[1]		One Unit Emissions		Three Units Emissions	
		lb/10^6 scf	lb/MMBtu	lb/hr	tons/year	lb/hr	tons/year
91-57-6	2-Methylnaphthalene	2.40E-05	2.35E-08	3.56E-08	1.56E-07	1.07E-07	4.68E-07
56-49-5	3-Methylchloranthrene	1.80E-06	1.76E-09	2.67E-09	1.17E-08	8.01E-09	3.51E-08
57-97-6	7,12-Dimethylbenz(a)anthracene	1.60E-05	1.57E-08	2.37E-08	1.04E-07	7.12E-08	3.12E-07
83-32-9	Acenaphthene	1.80E-06	1.76E-09	2.67E-09	1.17E-08	8.01E-09	3.51E-08
203-96-8	Acenaphthylene	1.80E-06	1.76E-09	2.67E-09	1.17E-08	8.01E-09	3.51E-08
120-12-7	Anthracene	2.40E-06	2.35E-09	3.56E-09	1.56E-08	1.07E-08	4.68E-08
56-55-3	Benz(a)anthracene	1.80E-06	1.76E-09	2.67E-09	1.17E-08	8.01E-09	3.51E-08
71-43-2	Benzene	2.10E-03	2.06E-06	3.11E-06	1.36E-05	9.34E-06	4.09E-05
50-32-8	Benzo(a)pyrene	1.20E-06	1.18E-09	1.78E-09	7.79E-09	5.34E-09	2.34E-08
205-99-2	Benzo(b)fluoranthene	1.80E-06	1.76E-09	2.67E-09	1.17E-08	8.01E-09	3.51E-08
191-24-2	Benzo(g,h,i)perylene	1.20E-06	1.18E-09	1.78E-09	7.79E-09	5.34E-09	2.34E-08
205-82-3	Benzo(k)fluoranthene	1.80E-06	1.76E-09	2.67E-09	1.17E-08	8.01E-09	3.51E-08
218-01-9	Chrysene	1.80E-06	1.76E-09	2.67E-09	1.17E-08	8.01E-09	3.51E-08
53-70-3	Dibenzo(a,h)anthracene	1.20E-06	1.18E-09	1.78E-09	7.79E-09	5.34E-09	2.34E-08
25321-22-6	Dichlorobenzene	1.20E-03	1.18E-06	1.78E-06	7.79E-06	5.34E-06	2.34E-05
206-44-0	Fluoranthene	3.00E-06	2.94E-09	4.45E-09	1.95E-08	1.33E-08	5.85E-08
86-73-7	Fluorene	2.80E-06	2.75E-09	4.15E-09	1.82E-08	1.25E-08	5.46E-08
50-00-0	Formaldehyde	7.20E-02	7.06E-05	1.07E-04	4.68E-04	3.20E-04	1.40E-03
110-54-3	Hexane	1.80E+00	1.76E-03	2.67E-03	1.17E-02	8.01E-03	3.51E-02
193-39-5	Indeno(1,2,3-cd)pyrene	1.80E-06	1.76E-09	2.67E-09	1.17E-08	8.01E-09	3.51E-08
91-20-3	Naphthalene	6.10E-04	5.98E-07	9.05E-07	3.96E-06	2.71E-06	1.19E-05
85-01-8	Phenanathrene	1.70E-05	1.67E-08	2.52E-08	1.10E-07	7.56E-08	3.31E-07
129-00-0	Pyrene	5.00E-06	4.90E-09	7.41E-09	3.25E-08	2.22E-08	9.74E-08
108-88-3	Toluene	3.40E-03	3.33E-06	5.04E-06	2.21E-05	1.51E-05	6.63E-05
7440-38-2	Arsenic	2.00E-04	1.96E-07	2.97E-07	1.30E-06	8.90E-07	3.90E-06
7440-41-7	Beryllium	1.20E-05	1.18E-08	1.78E-08	7.79E-08	5.34E-08	2.34E-07
7440-43-9	Cadmium	1.10E-03	1.08E-06	1.63E-06	7.14E-06	4.89E-06	2.14E-05
7440-47-3	Chromium	1.40E-03	1.37E-06	2.08E-06	9.09E-06	6.23E-06	2.73E-05
7440-48-4	Cobalt	8.40E-05	8.24E-08	1.25E-07	5.46E-07	3.74E-07	1.64E-06
7439-96-5	Manganese	3.80E-04	3.73E-07	5.64E-07	2.47E-06	1.69E-06	7.40E-06
7439-97-6	Mercury	2.60E-04	2.55E-07	3.86E-07	1.69E-06	1.16E-06	5.07E-06
7440-02-0	Nickel	2.10E-03	2.06E-06	3.11E-06	1.36E-05	9.34E-06	4.09E-05
7782-49-2	Selenium	2.40E-05	2.35E-08	3.56E-08	1.56E-07	1.07E-07	4.68E-07
			VOC HAPs Subtotal	2.79E-03	1.22E-02	8.36E-03	3.66E-02
			Metal HAPs Subtotal	8.25E-06	3.61E-05	2.47E-05	1.08E-04
			Total HAPs	2.80E-03	1.22E-02	8.39E-03	3.67E-02

References:
1. AP42 Table 1.4-3 and Table 1.4-4.
Conversion from lb/10^6 scf to lb/MMBtu (divide by) = 1,020

Body Prep Room (4S)

The following methodology for estimating emissions is used for particulate matter from sanding of the truck body to allow for painting. The Regulation 7 particulate mass standard limit is used to estimate these emissions. Using 5,000 lbs/hour as the maximum weight of process material processed through the operations in a single hour, for an 'a' source Table 45-7A results in a particulate matter emission rate of 5.0 lbs/hour.

	Regulation 7 Mass Weight Limit (lbs/hr)	Requested Permit Limits	
		lbs/hr	tons/yr
PM	5.00	5.00	21.90
PM_{10} (2)	2.38	2.38	10.43
$PM_{2.5}$ (2)	2.38	2.38	10.43

(1) For calculation purposes it is assumed that grinding operates at 8,760 hrs/year.
(2) PM10=PM/2.1 and PM2.5=PM10

Welding (6S)

	Usage		Particulates Emission Factor(1)	Emissions	
	lbs/hr	lbs/yr	PM/PM10/PM2.5 (per 1,000 pounds)	lbs/hr	tons/yr
Welding	1	500	81.6	0.08	0.02

(1) Emission factor from AP-42 Table 12.19-1 worst case of all electrode types.

HAP	HAPs Emission Factor(1) (10^{-1}/per 1,000 pounds)	Emissions	
		lbs/hr	tons/yr
Cr	25.30	0.0026	0.0007
Cr(VI)	18.80	0.0019	0.0005
Co	0.01	0.0001	0.0001
Mn	232.00	0.0232	0.0058
Ni	17.10	0.0018	0.0005
Pb	1.62	0.0002	0.0001
	Total =	0.0298	0.0077

Rounded to = 4

(1) Emission factors from worst case of electrode type for each HAP in AP-42 Table 12.19-2 of all electrode types.

By: PEW
Date: 05/19/2015

Checked by: LKB
Date: 05/21/2015

Miscellaneous Touch-up Paint, Cleaning, and Material Use (5S)

Item Name	Item Description	VOC (g/l)	VOC (%)	VOC (lb/gal)	Xylene	Ethlybenzene	Toluene	Methanol
Rustoleum Enamel	Black Spray Paint	541			10	5	5	
Rustoleum	Clear Enamel Paint	584					20	
Rustoleum Industrial Choice	White Spray Paint	507			10	5		
Rustoleum Industrial Choice	Yellow Spray Paint	509			10	5		
3M Protector	Rubberized Undercoating	440					30	0.5
Magnaflux Spotcheck SKC-5	CF Cleaner		90					
Magnaflux Spotcheck SKD-S2	Developer	750						
WD - 40	WD - 40	412	49.5					
CRC Brakleen	Brake Cleaner	657.2	84				25	50
Asian	Black Paint for Online Sprayer	0	0					
Lacquer Thinner 106	Paint Gun Cleaner			4.4	3	0.8	30	20
Low HAP Cleaning Solvent	Paint Gun Cleaner			3.9			10	
Final Klean Fast Dry Cleaner	Cleaning Solvent			6.1			12	
Low VOC Final Klean	Cleaning Solvent			0.5				

Item Name	2014	Max Usage	Can Size		
	Cans/Yr	Cans/Yr	fl-oz	g/can	liter/can
Rustoleum Enamel	5,175	12,814	15	426	0.444
Rustoleum	132	327	15	426	0.444
Rustoleum Industrial Choice	122	302	15	426	0.444
Rustoleum Industrial Choice	53	131	15	426	0.444
3M Protector	121	300	16	454	0.473
Magnaflux Spotcheck SKC-5	478	1,184	16	454	0.473
Magnaflux Spotcheck SKD-S2	577	1,429	16	454	0.473
WD - 40	47	116	16	454	0.473
CRC Brakleen	46	114	20	397	0.591
Asian	169	418	NA	NA	NA
		gal/yr	lb/gal		
Lacquer Thinner 106		365	6.78		
Low HAP Cleaning Solvent		365	6.56		
Final Klean Fast Dry Cleaner		365	6.07		
Low VOC Final Klean		365	8.31		

Item Name	Max Weight	Usage	VOC			
	lbs/yr	liter/yr	grams/yr	lb/hr(1)	lbs/yr(2)	tpy(2)
Rustoleum Enamel	12,024	5684	3,075,263	2.37	6,773.71	3.39
Rustoleum	307	145	84,676	0.07	186.51	0.09
Rustoleum Industrial Choice	283	134	67,943	0.05	149.65	0.07
Rustoleum Industrial Choice	123	58	29,632	0.02	65.27	0.03
3M Protector	300	142	62,379	0.05	137.40	0.07
Magnaflux Spotcheck SKC-5	1,184	560	483,622	0.37	1,065.25	0.53
Magnaflux Spotcheck SKD-S2	1,429	676	507,038	0.39	1,116.82	0.56
WD - 40	116	55	22,688	0.02	49.97	0.02
CRC Brakleen	100	67	44,276	0.03	97.52	0.05
Asian	NA	NA	NA	NA	NA	NA
Lacquer Thinner 106	2,475	NA	NA	0.56	1,606.00	0.80
Low HAP Cleaning Solvent	2,394	NA	NA	0.50	1,423.50	0.71
Final Klean Fast Dry Cleaner	2,216	NA	NA	0.78	2,226.50	1.11
Low VOC Final Klean	3,033	NA	NA	0.06	182.50	0.09
			Total	5.28	15,080.61	7.54

Item Name	Xylene		Ethlybenzene		Toluene		Methanol	
	lb/hr(1)	tpy(2)	lb/hr(1)	tpy(2)	lb/hr(1)	tpy(2)	lb/hr(1)	tpy(2)
Rustoleum Enamel	0.4208	0.6012	0.2104	0.3006	0.2104	0.3006	0	0
Rustoleum	0	0	0	0	0.0215	0.0307	0	0
Rustoleum Industrial Choice	0.0099	0.0142	0.0050	0.0071	0	0	0	0
Rustoleum Industrial Choice	0.0043	0.0062	0.0022	0.0031	0	0	0	0
3M Protector	0	0	0	0	0.0315	0.0449	0.0005	0.0007
Magnaflux Spotcheck SKC-5	0	0	0	0	0	0	0	0
Magnaflux Spotcheck SKD-S2	0	0	0	0	0	0	0	0
WD - 40	0	0	0	0	0	0	0	0
CRC Brakleen	0	0	0	0	0.0087	0.0125	0.0174	0.0249
Asian	NA	NA	NA	NA	NA	NA	NA	NA
Lacquer Thinner 106	0.0260	0.0371	0.0069	0.0099	0.2598	0.3712	0.1732	0.2475
Low HAP Cleaning Solvent	0	0	0	0	0.0838	0.1197	0	0
Final Klean Fast Dry Cleaner	0	0	0	0	0.0931	0.1329	0	0
Low VOC Final Klean	0	0	0	0	0	0	0	0
Total	0.4611	0.6586	0.2245	0.3207	0.7088	1.0125	0.1912	0.2731
						Total HAPS	1.59	2.26

1 liter = 33.814 fluid ounces
1 pound = 454 grams

Notes:
1. Based on seven (7) trucks per hour.
2. Based on 20,000 trucks per year.

By: PEW
Date: 05/19/2015

Checked by: LKB
Date: 05/21/2015

Truck Engine Emissions (7S)

Engine =	260	horsepower	1 gram =	0.002204	lbs
Engine Test Time =	40	minutes	Trucks/year =	20,000	Provided
	0.67	hours	Trucks/hour =	7.0	Provided
Operations =	246	days/yr	BSFC[3]=	7,000	Btu/hp/hr
	24	hrs/day			
	5,904	hours/year			

1. Criteria Pollutant Emissions

Criteria Pollutant	Emission Factor			Emissions	
	(g/hp-hr)	(lb/hp-hr)	EF Source	lb/hr	ton/yr
PM/PM10/PM2.5	0.008	1.76E-05	Manufacturer	0.03	0.09
SO_2	NA	2.05E-03	AP42 Table 3.3-1.	2.49	7.35
VOC	0.01	2.20E-05	Manufacturer	0.03	0.09
CO	0.013	2.87E-05	Manufacturer	0.04	0.12
NO_x	0.195	4.30E-04	Manufacturer	0.53	1.56

2. Hazardous Air Pollutant Emissions

Hazardous Air Pollutant	Emission Factor [3] (lb/MMBtu)	Emissions	
		lb/hr	ton/yr
Benzene[2]	9.33E-04	0.0079	0.0234
Toluene	4.09E-04	0.0035	0.0103
Xylenes	2.85E-04	0.0024	0.0071
1,3-Butadiene[2]	3.91E-05	0.00033	0.0010
Formaldehyde[2]	1.18E-03	0.0100	0.0296
Acetaldehyde	7.67E-04	0.0065	0.0192
Acrolein	9.25E-05	0.0008	0.0023
Naphthalene	8.48E-05	0.0007	0.0021
Total HAPs		0.0322	0.0951

1. AP42 Table 3.3-2.
2. Toxic Air Pollutant (TAP) by 45CSR13 Table 45-13A.
3. Brake Specific Fuel Consumption.

By: PEW
Date: 05/19/2015

Checked by: LKB
Date: 05/21/2015

Parts Washer (8S)

	Uncontrolled	Controlled	
Emission Factor(1)	0.33	0.2871	tpy/unit
Number of Units	2	2	No.
Hours Per Year	8,760	8,760	hrs/yr
Emission	1,320	1,148	lbs/yr
	0.15	0.13	lbs/hr
	0.66	0.57	tpy

Emission Reduction for Cover(2)	13	%

References:
1. AP-42, Table 4.6-2
2. AP-42, Table 4.6-3 Footnote E

By: PEW
Date: 05/19/2015

Checked by: LKB
Date: 05/21/2015

Emergency Generator (9S)

	Specifications		
Fuel Type =	Natural Gas		
Fuel Usage =	316	cu. ft./hour	Manufacturer
Engine Power =	22	kW	Manufacturer
HHV =	1,000	Btu/scf	Constant
Maximum Horsepower =	40	hp	Manufacturer
Maximum Fuel Input =	0.32	MMBtu/hour	Calculated
	453.59	gram/lb	Constant

Hours Per Year = 500

Regulated Pollutant	Emission Factor (g/hp-hr)(1)	Emission Factor (lb/MMBtu)(2)	Hourly Emissions (lbs/hour)	Annual Emissions (tons/year)
NO_X	2.15	4.08	0.19	0.05
CO	101.28	3.72	8.93	2.23
SO2	NA	0.0006	0.0002	0.0001
$PM/PM_{10}/PM_{2.5}$	NA	0.00991	0.0031	0.0008
VOC	2.34	0.12	0.21	0.0516
Hazardous Air Pollutants (HAPS) (2)				
1,1,2,2-tetrachloroethane	NA	4.00E-05	0.00002	0.00001
1,1,2-trichloroethane	NA	3.18E-05	0.00002	0.00001
1,3-Butadiene	NA	6.63E-04	0.00021	0.00006
1,3-dichloropropene	NA	2.65E-05	0.00001	0.00001
2-methylnaphthalene	NA	3.32E-05	0.00002	0.00001
2,2,4-trimethylpentane	NA	2.50E-04	0.00008	0.00002
Acenaphthene	NA	1.25E-06	0.00001	0.00001
Acetaldehyde	NA	2.79E-03	0.00089	0.00023
Acrolein	NA	2.63E-03	0.00084	0.00021
Benzene	NA	1.58E-03	0.00050	0.00013
Carbon Tetrachloride	NA	1.77E-05	0.00001	0.00001
Chlorobenzene	NA	1.29E-05	0.00001	0.00001
Chloroform	NA	1.37E-05	0.00001	0.00001
Ethylbenzene	NA	2.48E-05	0.00001	0.00001
Ethylene dibromide	NA	2.13E-05	0.00001	0.00001
Formaldehyde	NA	2.50E-02	0.00790	0.00198
Naphthalene	NA	9.71E-05	0.00004	0.00001
PAH	NA	1.41E-04	0.00005	0.00002
Styrene	NA	2.36E-05	0.00001	0.00001
Tetrachloroethane	NA	2.48E-06	0.00001	0.00001
Toluene	NA	5.58E-04	0.00018	0.00005
Vinyl chloride	NA	1.49E-05	0.00001	0.00001
Xylenes	NA	1.95E-04	0.00007	0.00002
		Total HAPS	0.0109	0.0029

Round to = 5

Notes:

1. Emissions factors provided by Generac.
2. Emission factors from AP-42 Table 3.2-2 or 3.2-3. Air/fuel ratio is unknown-highest EF for each pollutant used.

Total Building Heaters (10S)

Emission	Emissions	
Type	lb/hr	tons/year
CO	1.51	6.64
NO_X	1.81	7.90
PM	0.14	0.60
PM10	0.14	0.60
PM2.5	0.14	0.60
SO2	0.02	0.05
VOC/TOC	0.10	0.43
Lead	0.000009	0.000040
Total HAPS	3.40E-02	1.49E-01

By: PEW
Date: 05/19/2015

Checked by: LKB
Date: 05/21/2015

Existing Building Heaters

There are multiple existing building heaters at this facility with variable heat ratings. The emissions provided here are for the existing building heaters and the total heat rating (total Btu/hr).

Total Heater Rating =	16,210,000	Btu/hr
	16.21	MMBtu/hr
Operating Hours =	8,760	hrs/yr

Emission Type	EF (1)		Emissions	
	$lb/10^6$ scf	lb/MMBtu (3)	lb/hr	tons/year
CO	84	0.08235	1.33	5.85
NO_X	100	0.09804	1.59	6.96
PM	7.6	0.00745	0.12	0.53
PM10 (2)	7.6	0.00745	0.12	0.53
PM2.5 (2)	7.6	0.00745	0.12	0.53
SO_2	0.6	0.00059	0.01	0.04
VOC/TOC	5.5	0.00539	0.09	0.38
Lead	0.0005	4.90E-07	0.000008	0.000035
Rounding to =	2			

Note:
1. Emission factors from AP-42, 1.4, Natural Gas Combustion, 7/98.
2. It is assumed that PM10 and PM2.5 are equal to PM.
3. Conversion from lb/10^6 scf to lb/MMBtu (divide by) = 1,020

By: PEW
Date: 05/19/2015

Checked by: LKB
Date: 05/21/2015

Existing Building Heaters HAPs

Total Heaters Rating =	16.21	MMBtu/hr
Operating Hours =	8,760	hrs/yr

CAS No.	Hazardous Air Pollutants	EF (1)		Emissions	
		lb/10^6 scf	lb/MMBtu (2)	lb/hr	tons/year
91-57-6	2-Methylnaphthalene	2.40E-05	2.35E-08	3.81E-07	1.67E-06
56-49-5	3-Methylchloranthrene	1.80E-06	1.76E-09	2.86E-08	1.25E-07
57-97-6	7,12-Dimethylbenz(a)anthracene	1.60E-05	1.57E-08	2.54E-07	1.11E-06
83-32-9	Acenaphthene	1.80E-06	1.76E-09	2.86E-08	1.25E-07
203-96-8	Acenaphthylene	1.80E-06	1.76E-09	2.86E-08	1.25E-07
120-12-7	Anthracene	2.40E-06	2.35E-09	3.81E-08	1.67E-07
56-55-3	Benz(a)anthracene	1.80E-06	1.76E-09	2.86E-08	1.25E-07
71-43-2	Benzene	2.10E-03	2.06E-06	3.34E-05	1.46E-04
50-32-8	Benzo(a)pyrene	1.20E-06	1.18E-09	1.91E-08	8.35E-08
205-99-2	Benzo(b)fluoranthene	1.80E-06	1.76E-09	2.86E-08	1.25E-07
191-24-2	Benzo(g,h,i)perylene	1.20E-06	1.18E-09	1.91E-08	8.35E-08
205-82-3	Benzo(k)fluoranthene	1.80E-06	1.76E-09	2.86E-08	1.25E-07
218-01-9	Chrysene	1.80E-06	1.76E-09	2.86E-08	1.25E-07
53-70-3	Dibenzo(a,h)anthracene	1.20E-06	1.18E-09	1.91E-08	8.35E-08
25321-22-6	Dichlorobenzene	1.20E-03	1.18E-06	1.91E-05	8.35E-05
206-44-0	Fluoranthene	3.00E-06	2.94E-09	4.77E-08	2.09E-07
86-73-7	Fluorene	2.80E-06	2.75E-09	4.45E-08	1.95E-07
50-00-0	Formaldehyde	7.20E-02	7.06E-05	1.14E-03	5.01E-03
110-54-3	Hexane	1.80E+00	1.76E-03	2.86E-02	1.25E-01
193-39-5	Indeno(1,2,3-cd)pyrene	1.80E-06	1.76E-09	2.86E-08	1.25E-07
91-20-3	Naphthalene	6.10E-04	5.98E-07	9.69E-06	4.25E-05
85-01-8	Phenanathrene	1.70E-05	1.67E-08	2.70E-07	1.18E-06
129-00-0	Pyrene	5.00E-06	4.90E-09	7.95E-08	3.48E-07
108-88-3	Toluene	3.40E-03	3.33E-06	5.40E-05	2.37E-04
7440-38-2	Arsenic	2.00E-04	1.96E-07	3.18E-06	1.39E-05
7440-41-7	Beryllium	1.20E-05	1.18E-08	1.91E-07	8.35E-07
7440-43-9	Cadmium	1.10E-03	1.08E-06	1.75E-05	7.66E-05
7440-47-3	Chromium	1.40E-03	1.37E-06	2.22E-05	9.75E-05
7440-48-4	Cobalt	8.40E-05	8.24E-08	1.33E-06	5.85E-06
7439-96-5	Manganese	3.80E-04	3.73E-07	6.04E-06	2.65E-05
7439-97-6	Mercury	2.60E-04	2.55E-07	4.13E-06	1.81E-05
7440-02-0	Nickel	2.10E-03	2.06E-06	3.34E-05	1.46E-04
7782-49-2	Selenium	2.40E-05	2.35E-08	3.81E-07	1.67E-06
			VOC HAPs Subtotal	2.99E-02	1.31E-01
			Metal HAPs Subtotal	8.84E-05	3.87E-04
			Total HAPs	3.00E-02	1.31E-01

References:
1. AP42 Table 1.4-3 and Table 1.4-4.
2. Conversion from lb/10^6 scf to lb/MMBtu (divide by) = 1,020

By: PEW
Date: 05/19/2015

Checked by: LKB
Date: 05/21/2015

New Building Heaters

There are multiple new/proposed building heaters for the expansion. The emissions provided here are for the new building heaters and the total heat rating (total Btu/hr).

Total Heater Rating =	2,200,000	Btu/hr
	2.2	MMBtu/hr
Operating Hours =	8,760	hrs/yr

Emission Type	EF (1)		Emissions	
	lb/10^6 scf	lb/MMBtu (3)	lb/hr	tons/year
CO	84	0.08235	0.18	0.79
NO_X	100	0.09804	0.22	0.94
PM	7.6	0.00745	0.02	0.07
PM10 (2)	7.6	0.00745	0.02	0.07
PM2.5 (2)	7.6	0.00745	0.02	0.07
SO_2	0.6	0.00059	0.01	0.01
VOC/TOC	5.5	0.00539	0.01	0.05
Lead	0.0005	4.90E-07	0.000001	0.000005

Rounding to = 2

Unit	Heat Rating (btu/hr)
Horizon	1,000,000
Trane	400,000
Trane	400,000
Trane	400,000
Total	2,200,000

Note:
1. Emission factors from AP-42, 1.4, Natural Gas Combustion, 7/98.
2. It is assumed that PM10 and PM2.5 are equal to PM.
3. Conversion from lb/10^6 scf to lb/MMBtu (divide by) = 1,020

By: PEW
Date: 05/19/2015

Checked by: LKB
Date: 05/21/2015

New Building Heaters HAPs

Total Heaters Rating =	2.2	MMBtu/hr
Operating Hours =	8,760	hrs/yr

CAS No.	Hazardous Air Pollutants	EF (1)		Emissions	
		lb/10^6 scf	lb/MMBtu (2)	lb/hr	tons/year
91-57-6	2-Methylnaphthalene	2.40E-05	2.35E-08	5.18E-08	2.27E-07
56-49-5	3-Methylchloranthrene	1.80E-06	1.76E-09	3.88E-09	1.70E-08
57-97-6	7,12-Dimethylbenz(a)anthracene	1.60E-05	1.57E-08	3.45E-08	1.51E-07
83-32-9	Acenaphthene	1.80E-06	1.76E-09	3.88E-09	1.70E-08
203-96-8	Acenaphthylene	1.80E-06	1.76E-09	3.88E-09	1.70E-08
120-12-7	Anthracene	2.40E-06	2.35E-09	5.18E-09	2.27E-08
56-55-3	Benz(a)anthracene	1.80E-06	1.76E-09	3.88E-09	1.70E-08
71-43-2	Benzene	2.10E-03	2.06E-06	4.53E-06	1.98E-05
50-32-8	Benzo(a)pyrene	1.20E-06	1.18E-09	2.59E-09	1.13E-08
205-99-2	Benzo(b)fluoranthene	1.80E-06	1.76E-09	3.88E-09	1.70E-08
191-24-2	Benzo(g,h,i)perylene	1.20E-06	1.18E-09	2.59E-09	1.13E-08
205-82-3	Benzo(k)fluoranthene	1.80E-06	1.76E-09	3.88E-09	1.70E-08
218-01-9	Chrysene	1.80E-06	1.76E-09	3.88E-09	1.70E-08
53-70-3	Dibenzo(a,h)anthracene	1.20E-06	1.18E-09	2.59E-09	1.13E-08
25321-22-6	Dichlorobenzene	1.20E-03	1.18E-06	2.59E-06	1.13E-05
206-44-0	Fluoranthene	3.00E-06	2.94E-09	6.47E-09	2.83E-08
86-73-7	Fluorene	2.80E-06	2.75E-09	6.04E-09	2.65E-08
50-00-0	Formaldehyde	7.20E-02	7.06E-05	1.55E-04	6.80E-04
110-54-3	Hexane	1.80E+00	1.76E-03	3.88E-03	1.70E-02
193-39-5	Indeno(1,2,3-cd)pyrene	1.80E-06	1.76E-09	3.88E-09	1.70E-08
91-20-3	Naphthalene	6.10E-04	5.98E-07	1.32E-06	5.76E-06
85-01-8	Phenanathrene	1.70E-05	1.67E-08	3.67E-08	1.61E-07
129-00-0	Pyrene	5.00E-06	4.90E-09	1.08E-08	4.72E-08
108-88-3	Toluene	3.40E-03	3.33E-06	7.33E-06	3.21E-05
7440-38-2	Arsenic	2.00E-04	1.96E-07	4.31E-07	1.89E-06
7440-41-7	Beryllium	1.20E-05	1.18E-08	2.59E-08	1.13E-07
7440-43-9	Cadmium	1.10E-03	1.08E-06	2.37E-06	1.04E-05
7440-47-3	Chromium	1.40E-03	1.37E-06	3.02E-06	1.32E-05
7440-48-4	Cobalt	8.40E-05	8.24E-08	1.81E-07	7.94E-07
7439-96-5	Manganese	3.80E-04	3.73E-07	8.20E-07	3.59E-06
7439-97-6	Mercury	2.60E-04	2.55E-07	5.61E-07	2.46E-06
7440-02-0	Nickel	2.10E-03	2.06E-06	4.53E-06	1.98E-05
7782-49-2	Selenium	2.40E-05	2.35E-08	5.18E-08	2.27E-07
			VOC HAPs Subtotal	4.05E-03	1.78E-02
			Metal HAPs Subtotal	1.20E-05	5.25E-05
			Total HAPs	4.07E-03	1.78E-02

References:
1. AP42 Table 1.4-3 and Table 1.4-4.
2. Conversion from lb/10^6 scf to lb/MMBtu (divide by) = 1,020

By: PEW
Date: 05/19/2015

Checked by: LKB
Date: 05/21/2015

Vehicle Activity (VA)

Paved Roadway: Finished trucks going from the plant to the parking area.

Emission Factor Equation from AP-42 Section 13.2.1, Paved Roads (January 2011):
E = [k * (sL/2)^0.65 * (W/3)^1.5 - C] * (1 - (P/4*N) = lb / Vehicle Mile Traveled (VMT)

	PM	PM10	PM2.5	
k =	0.011	0.0022	0.00054	dimensionless, particle size multiplier
sL =	9.7	9.7	9.7	surface material silt content (g/m^2)
W =	16.5	16.5	16.5	tons, mean vehicle weight
P =	157	157	157	no. days/year with 0.01 in of rain
C =	0.00047	0.00047	0.00047	factor for exhaust, brake wear and tire wear
e =	0.35	0.07	0.02	lb/VMT

Rounding to 2

Trucks

Pollutant	No. of Vehicles		Miles Per Trip	Control Device		Emissions			
						Uncontrolled		Controlled	
	Per Hour	Per Year	(mi)	Type	Effic(%)	(lb/hr)	(tpy)	(lb/hr)	(tpy)
PM	7	20,000	0.55	N	0	1.35	1.93	1.35	1.93
PM10	7	20,000	0.55	N	0	0.27	0.39	0.27	0.39
PM2.5	7	20,000	0.55	N	0	0.08	0.11	0.08	0.11

Paved Roadway: Delivery trucks entering and then leaving the site.

Emission Factor Equation from AP-42 Section 13.2.1, Paved Roads (January 2011):
E = [k * (sL/2)^0.65 * (W/3)^1.5 - C] * (1 - (P/4*N) = lb / Vehicle Mile Traveled (VMT)

	PM	PM10	PM2.5	
k =	0.011	0.0022	0.00054	dimensionless, particle size multiplier
sL =	9.7	9.7	9.7	surface material silt content (g/m^2)
W =	40.0	40.0	40.0	tons, mean vehicle weight (80,000 pounds maximum road weight)
P =	157	157	157	no. days/year with 0.01 in of rain
C =	0.00047	0.00047	0.00047	factor for exhaust, brake wear and tire wear
e =	1.33	0.27	0.07	lb/VMT

Rounding to 2

Trucks

Pollutant	No. of Vehicles (1)		Miles Per Trip	Control Device		Emissions			
						Uncontrolled		Controlled	
	Per Hour	Per Year	(mi)	Type	Effic(%)	(lb/hr)	(tpy)	(lb/hr)	(tpy)
PM	4	10,950	0.55	N	0	2.93	4.00	2.93	4.00
PM10	4	10,950	0.55	N	0	0.59	0.81	0.59	0.81
PM2.5	4	10,950	0.55	N	0	0.16	0.22	0.16	0.22

1. Number of vehicles based on 30 trucks per day, average trucks per hour of 4, and 365 days per year.

Total Paved Roadway Emissions			
Uncontrolled		Controlled	
(lb/hr)	(tpy)	(lb/hr)	(tpy)
4.28	5.93	4.28	5.93
0.86	1.20	0.86	1.20
0.24	0.33	0.24	0.33

By: PEW
Date: 05/19/2015

Checked by: LKB
Date: 05.21/2015

Vehicular Traffic (VA)

Unpaved Haulroads

PM Emissions

Source	Vehicle Trips per Hour	Vehicle Trips per Year	Miles per Trip	Emission Factor [1] (lb/VMT)	Uncontrolled (lb/hr)	Uncontrolled (tpy)	Control Device	Control Efficiency (%)	Controlled (lb/hr)	Controlled (tpy)
Plant into Gravel Area	7	20,000	0.15	3.70	3.89	5.55	N	0	3.89	5.55
Leaving Site	7	20,000	0.30	3.70	7.77	11.10	N	0	7.77	11.10
				Total	11.66	16.65		Total	11.66	16.65

PM10 Emissions

Source	Vehicle Trips per Hour	Vehicle Trips per Year	Miles per Trip	Emission Factor [1] (lb/VMT)	Uncontrolled (lb/hr)	Uncontrolled (tpy)	Control Device	Control Efficiency (%)	Controlled (lb/hr)	Controlled (tpy)
Plant into Gravel Area	7	20,000	0.15	0.99	1.04	1.49	N	0	1.04	1.49
Leaving Site	7	20,000	0.30	0.99	2.08	2.97	N	0	2.08	2.97
				Total	3.12	4.46		Total	3.12	4.46

PM2.5 Emissions

Source	Vehicle Trips per Hour	Vehicle Trips per Year	Miles per Trip	Emission Factor [1] (lb/VMT)	Uncontrolled (lb/hr)	Uncontrolled (tpy)	Control Device	Control Efficiency (%)	Controlled (lb/hr)	Controlled (tpy)
Plant into Gravel Area	7	20,000	0.15	0.10	0.11	0.15	N	0	0.11	0.15
Leaving Site	7	20,000	0.30	0.10	0.21	0.30	N	0	0.21	0.3
				Total	0.32	0.45		Total	0.32	0.45

Emission Equation AP-42 Section 13.2.2, Unpaved Roads (12/03), where:
$e = k\,[(s/12)^a\,(W/3)^b]\,[(365-p)/365]$ = lb/ Vehicle Mile Traveled (VMT)

	Emission Factors[1] PM	PM10	PM2.5	
k =	4.9	1.5	0.15	dimensionless, particle size multiplier
s =	6	6	6	%, surface material silt content
W =	16.5	16.5	16.5	tons, mean vehicle weight
a =	0.7	0.9	0.9	constants
b =	0.45	0.45	0.45	constants
p =	157	157	157	no. days/year with 0.1 in of rain
e =	3.70	0.99	0.10	lb/VMT

1. AP-42, Section 13.2.2 (11/06)

ATTACHMENT O

MONITORING, RECORDKEEPING, REPORTING, TESTING PLANS

ATTACHMENT O

MONITORING/RECORDKEEPING/REPORTING/TESTING PLANS

Hino Motors Manufacturing U.S.A., Inc. requests monitoring, recordkeeping, reporting and testing as stated in the Emissions Unit Data Sheets contained in Attachment L.

ATTACHMENT P

PUBLIC NOTICE

LEGAL ADVERTISEMENT

AIR QUALITY PERMIT NOTICE
Notice of Application

Notice is given that Hino Motors Manufacturing U.S.A., Inc. has applied to the West Virginia Department of Environmental Protection, Division of Air Quality, for a permit for the construction of a custom painting operation at their truck assembly facility located on Hino Way near Williamstown, Wood County, West Virginia. The latitude and longitude coordinates are: 39.393910 and -81.470051.

The applicant estimates the potential to discharge the following Regulated Air Pollutants will be: VOC of 37.05 tons per year (tpy); PM of 45.54 tpy; PM_{10} of 17.15 tpy; $PM_{2.5}$ of 12.27 tpy; NO_x of 11.46 tpy; CO of 10.64 tpy; SO_2 of 7.43 tpy; lead of 0.000049 tpy, and total HAPs of 5.17 tpy.

This is an existing operation installed in 2007 and will begin operation under the permit upon issuance of permit. The custom color paint booths will begin operating in September 2015. Written comments will be received by the West Virginia Department of Environmental Protection, Division of Air Quality, 601 57th Street, Charleston, WV 25304, for at least 30 calendar days from the date of publication of this notice.

Any questions regarding this permit application should be directed to the DAQ at (304) 926-0499, Extension 1227, during normal business hours.

Dated this the (PLEASE INSERT DATE) day of May, 2015.

By: Hino Motors Manufacturing U.S.A., Inc.
Steve Stalnaker
Vice President
1 Hino Way
Williamstown, West Virginia 26187

APPENDIX

ADDITIONAL EQUIPMENT INFORMATION

PAINT BOOTH

LIGHTING

Each six tube light fixture (standard) requires 1.42 FLA (Full Load Amps) at 120 V and 0.62 FLA at 277 V.
(28 lights at 120 V =39.76FLA. 28 lights at 277 V =17.36FLA.)

A 40 Amp 120 V or 277 V circuit is required (by others) to connection point Ⓛ

FILTERS

Intake Filter, pocket style :	95% average arrestance
Plenum Filter :	99.9% efficient at removing particles 10 microns and larger
Primary Exhaust Filter, GFS WAVE ® roll media:	99.67% average arrestance
Secondary Exhaust Filter, pocket style :	95% average arrestance

BOOTH LENGTH

Inside Length - Overall	42'-0" [12802]
Outside Length - Booth only	42'-5" [12929]
Outside Length - SB w/ Door Swing	45'-4" [13818]
Outside Length - DT w/ Door Swing	48'-3" [14707]

GLOBAL FINISHING SOLUTIONS L.L.C. offers a complete line of automotive spray booths that conform to the requirements of:

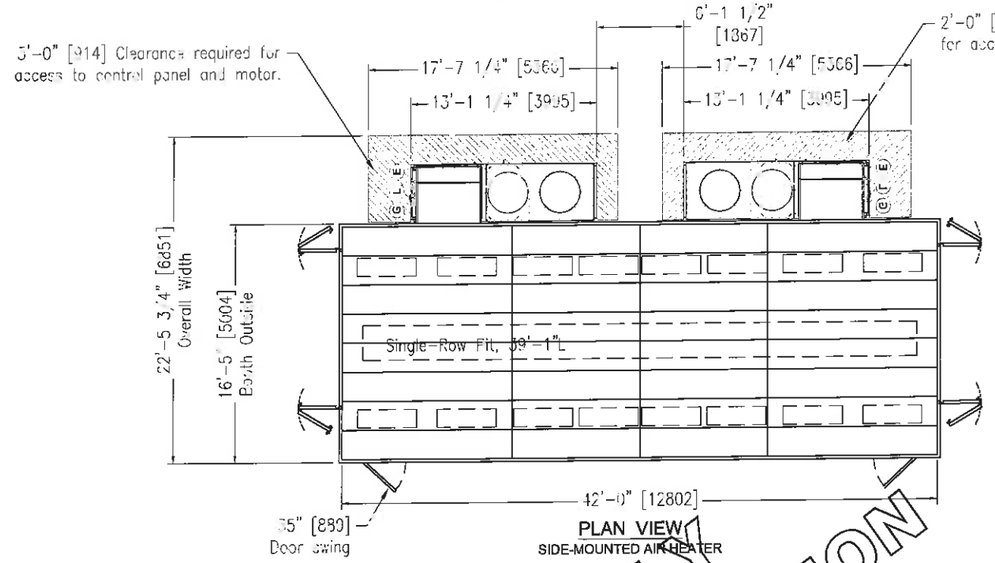
* NFPA-33 Standard for spray application using flammable or combustible materials
* NFPA-86 Standard for ovens and furnaces
* NFPA-91 Standard for exhaust systems for air conveying of materials
* NFPA-101 Life Safety Code
* NFPA-70 National Electric Code
* OSHA Safety and Health Standards (29CFR 1910, 1910.107)
* 2009 IBC International Building Code
* 2009 IFC International Fire Code Chapter 15

This booth has been approved by:
*ETL Equipment Testing Laboratory report # 3049856-3 Cabin
*ETL Equipment Testing Laboratory report # 3179888CRT-001 Direct Fired Industrial Air Heater

Conformance to all these requirements is dependent upon the manner in which the equipment is installed. The contractor will make certain that all of the electrical wiring and conduit, piping, gas supply, roof penetrations, automatic fire protection systems, and the location of the equipment within the building also conforms to the cited codes and other references.

Glass used in the spray booth meets and exceeds ANSI Z-97.1 standard.

Fire suppression system is NOT included with the standard booth but is required by NFPA-33.

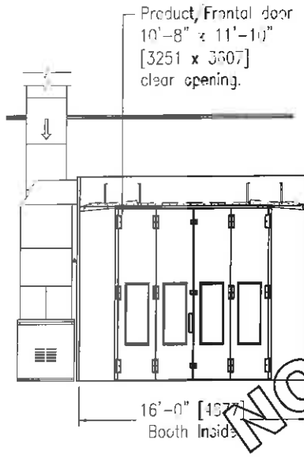


PLAN VIEW
SIDE-MOUNTED AIR HEATER

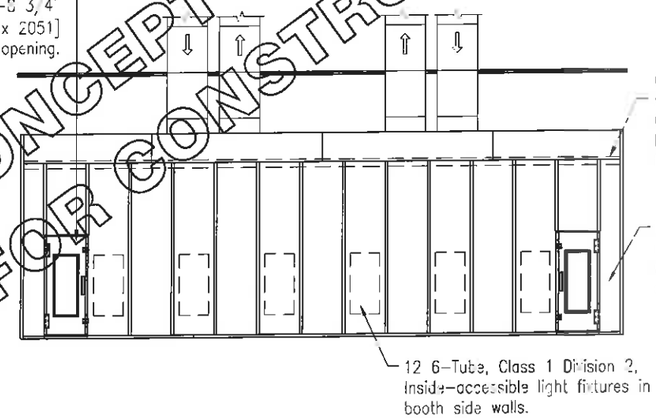
THIS DRAWING IS INTENDED TO BE A CONCEPTUAL AID AND IS PROVIDED FOR GENERAL ILLUSTRATIVE PURPOSES ONLY.

THIS DRAWING IS NOT INTENDED FOR USE AS AN ENGINEERING DESIGN PLAN, AND IS NOT WARRANTED WITH RESPECT TO MERCHANTABILITY, SUITABILITY, OR FITNESS FOR A PARTICULAR PURPOSE.

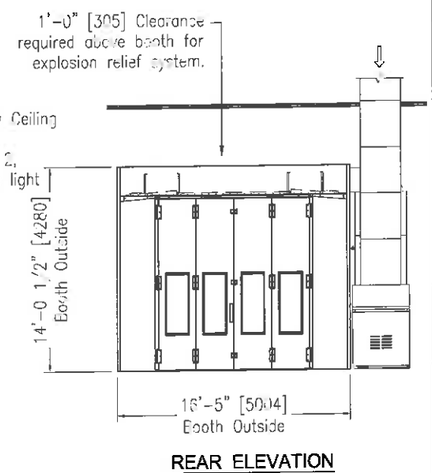
NOTE:
Air exhaust must **be:**
- at least 6 ft [1829] from any exterior wall or roof
- at least 10 ft [3048] away from the intake
- not lower than the air intake
- at least 30 ft [9144] away from the property line



FRONT ELEVATION



RH SIDE ELEVATION



REAR ELEVATION

NOT FOR CONSTRUCTION
CONCEPT ONLY

GAS TRAIN

MOTOR POWER (hp)	FLOW RATE (cfm)	FUEL TYPE	Maximum CO CONC. (ppm)	Maximum NO_2 CONC. (ppm)	PROFILE PLATE Delta P (inWC) Min.	PROFILE PLATE Delta P (inWC) Max.	ENERGY PRODUCTION (Btu/h) Min.	ENERGY PRODUCTION (Btu/h) Max.	Maximum MANIFOLD PRESSURE (inWC)	INLET PRESSURE @ Max. Btu & cfm (inWC)	TEMP. RISE (°F)	INLET PIPE
15	15,200 (x2)	NATURAL GAS	1.40	0.40	0.9	0.9	346,200	1,512,600	8.8	14.2	91	1 1/4" NPT
		PROPANE	1.40	0.44	0.9	0.9	321,400	1,323,500	2.5	5	80	

Gas supply required (by others) to gas connection point Ⓖ. Minimum gas pressure is required at maximum volume consumed.

MOTOR ELECT SPECS

FULL LOAD AMP DRAW							
MOTOR	HP	QTY	230V,1ph	200V, 3ph	220V, 3ph	440V, 3ph	575V, 3ph
INTAKE, EXHAUST	15	4	N/A	160.2	160	80	64
MINIMUM CIRCUIT CAPACITY (AMPS)							
15hp INTAKE, 15hp EXHAUST			N/A	215	200	100	80

Minimum circuit capacity is required (by others) to connection point Ⓔ. Motors UL recognized PRGYZ.

cETLus LISTED 3088468

GLOBAL FINISHING SOLUTIONS, LLC
12731 NORWAY ROAD
OSSEO, WI 54758 USS
PHONE: 800-848-9798 OR 800-468-5872

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CONCEPT REVISION
REV.: 1 DATE: BY:
REV.: 2 DATE: BY:
REV.: 3 DATE: BY:
REV.: 4 DATE: BY:
REV.: 5 DATE: BY:
REV.: 6 DATE: BY:
REV.: 7 DATE: BY:
REV.: 8 DATE: BY:

GLOBAL FINISHING SOLUTIONS

DESCRIPTION: ULTRA ATP DOWNDRAFT BOOTH 42'L x 16'W x 12'H w/(2) ULTRA AIR HEATERS
SCALE: 7/32" = 1'-0" | DRAWN BY: CRB | DATE: 12/31/14 | REVIEWED BY | DATE
CUSTOMER: DHI for HINO TRUCK
MANUFACTURING LEVELS: CONCEPT
DRAWING NUMBER: DHI-HINOTRUCK-ATP
SHEET: 1 of 1

PREP BOOTH

LIGHTING

Each four tube light fixture (standard) requires 1.0 FLA (Full Load Amps) at 120 V and 0.5 FLA at 277 V.
(16 lights at 120 V = 16 FLA. 16 lights at 277 V = 8.0 FLA.)

Each six tube light fixture (optional) requires 1.5 FLA at 120 V and 0.64 V at 277 V.

An appropriately sized 120 V or 277 V circuit is required (by others) to connection point L .

FILTERS

Intake Filter, pocket style:	95% average arrestance
Plenum Filter, 51" x 97":	99.9% efficient at removing particles 10 microns and larger
Exhaust Filter, GFS WAVE ® roll media:	99.97% average arrestance

BOOTH LENGTH

Inside Length	27'-0"
Outside Length - Booth only	27'-8"
Outside Length - SB w/ Door Swing	30'-10"
Outside Length - DT w/ Door Swing	34'-3"

Note:
Ductwork is fabricated from 18 gage galvanized steel.

Global Finishing Solutions offer a complete line of automotive spray booths that conform to the requirements of:

* NFPA-33 Standard for Spray Application Using Flammable and Combustible Materials
* NFPA-86 Standard for Ovens and Furnaces
* NFPA-91 Standard for Exhaust Systems for Air Conveying of Materials
* NFPA-101 Life Safety Code
* NFPA-70 National Electric Code
* OSHA Safety and Health Standards (29CFR 1910, 1910.107)
* 2006 IBC International Building Code
* 2006 IFC International Fire Code Ch.15

Electrical components, such as motors, motor starters, disconnect switches and push buttons, are listed or approved for the class or Division in which they are located.

Motors: UL recognized PRGYZ
Marathon Electric file E43417 (or equal)

Glass used in the spray booth, mix room and drying room is tempered and meets and exceeds ANSI Z-97.1.

This plenum has been approved by ETL Equipment Testing Laboratory report # 539591.

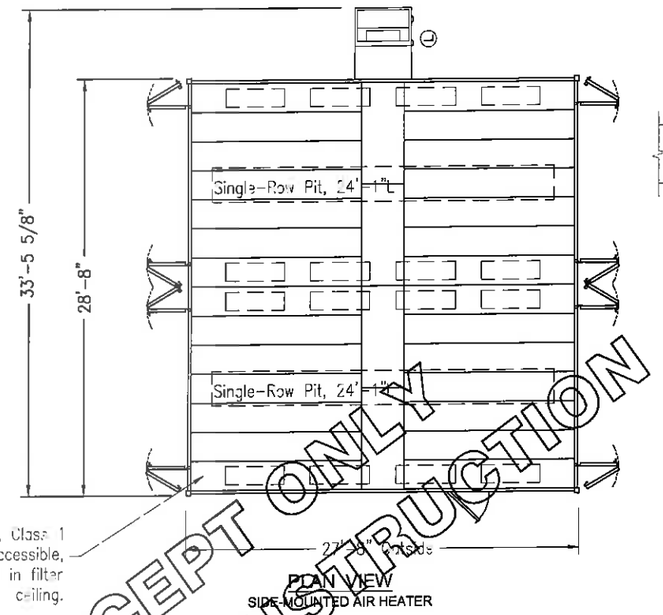
Conformance to all these requirements is dependant upon the manner in which the equipment is installed. The contractor will make certain that all of the electrical wiring and conduit, piping, gas supply, roof penetrations, automatic fire protection systems, and the location of the equipment within the building also conform to the cited codes and other references.

NOTES:

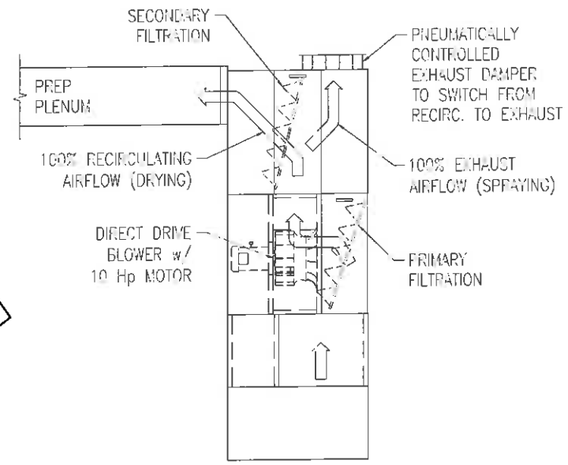
1. AIR EXTRACTION BOX :
10 H.P. TEFC MOTOR WITH DIRECT DRIVE, BACKWARD INCLINED TURBO FAN PRODUCES 12,000 cfm.

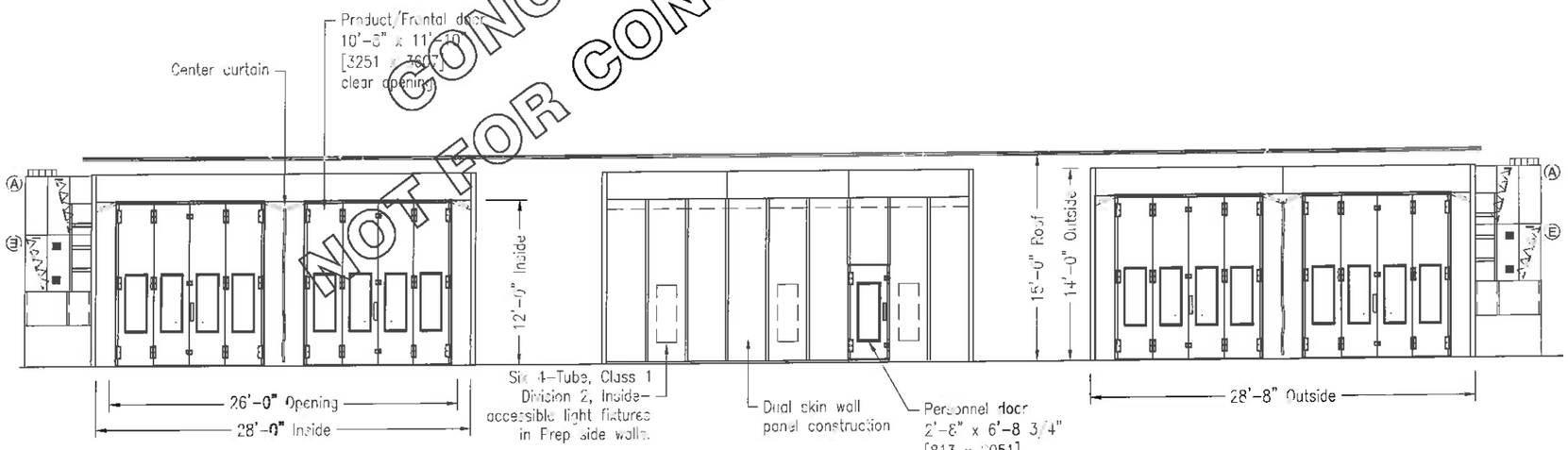
2. PREP STATION PLENUM LIGHTING :
SIXTEEN INSIDE ACCESS FLUORESCENT LIGHT FIXTURES. EACH FIXTURE – FOUR T8 TUBES, 85° COLOUR CORRECTED, 265 mA, 32 W, DUAL VOLTAGE ELECTRONIC BALLAST 120/277 V, 50/60 Hz. 120 TOTAL WATTS (4 x 32 W). 1.0 FLA PER FIXTURE.
INTERLOCKING SAFETY SWITCH.
ETL & ETL-C Listed. Class 1, Division 2, Groups A,B,C,D.

A 20A circuit is required (by others) to connection point L



PLAN VIEW
SIDE-MOUNTED AIR HEATER





FRONT ELEVATION

RH SIDE ELEVATION

REAR ELEVATION

AIR LINE

1/4" Tubing. Maximum Pressure of 140 psi. Customer to supply clean, dry air source. Bring air line to connection point (A)

MOTOR

Description	FULL LOAD AMP DRAW [60 Hz] 1 Ph 230 V	3 Ph 200 V	3 Ph 220 - 240 V	3 Ph 440 - 480 V	3 Ph 575 V
Exhaust Motor 10 Hp	50	28.6	27	14	11
Min. circuit capacity	65	40	35	20	15

Minimum circuit capacity is required (by others) to connection point (E).

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CONCEPT ONLY
NOT FOR CONSTRUCTION

3088468

GLOBAL FINISHING SOLUTIONS, LLC
12731 NORMAT ROAD
DESOTO, WI 54758 USA
PHONE: 800-846-8738 OR 800-468-5872

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REV.: 1	DATE:	BY:	REV.: 5	DATE:	BY:				
REV.: 2	DATE:	BY:	REV.: 6	DATE:	BY:				
REV.: 3	DATE:	BY:	REV.: 7	DATE:	BY:				
REV.: 4	DATE:	BY:	REV.: 8	DATE:	BY:				

GLOBAL FINISHING SOLUTIONS

DESCRIPTION: PROFESSIONAL DOWNDRAFT PREP 28'W x 27'L x 12'H w/EXTRACTION BOX

SCALE: 7/32" = 1'-0" | DRAWN BY: CRB | DATE: 12/31/14 | REVIEWED BY | DATE

CUSTOMER: DHI for HINO TRUCK

MANUFACTURING LEVELS: CONCEPT

DRAWING NUMBER: DHI-HINOTRUCK-PREP

SHEET: 1 of 1

TRUCK ENGINE EMISSIONS

Filters			
Location	Dimensions	Description	Qty
Pre-filter (optional)	20" x 25"	Wire framed filter panel	1
Intake Filter	20" x 48"	Wire framed Micro Clean panel	1

Electrical Requirements PMR with Optional Intake Fan		
Electrical Device	Full Load Amp Draw	Minimum Circuit Capacity
Intake Motor, 1/2hp, 120V, 1ph	9.8	30 Amp
Exhaust Motor, 1/2hp, 120V, 1ph	9.8	
Light Fixtures, Four Tube, 120V / 277V	1.0 / 0.5 (each)	

Electrical Requirements PMR with Exhaust Fan Only		
Electrical Device	Full Load Amp Draw	Minimum Circuit Capacity
Exhaust Motor, 1/2hp, 120V, 1ph	9.8	20 Amp
Light Fixtures, Four Tube, 120V / 277V	1.0 / 0.5 (each)	

This Paint Mix Room has been approved by ETL (Equipment Testing Laboratory) report # 100690377CRT-001.

Conformance to all these requirements is dependent upon the manner in which the equipment is installed. The contractor will make certain that all of the electrical wiring and conduit, piping, gas supply, roof penetrations, automatic fire protection systems, and the location of the equipment within the building also conforms to the cited codes and other references.

3088468

Paint Mix Room Construction Note:
1. Minimum circuit capacity is required (by others) to connection point E.
2. Booth is fabricated from 20 gage white precoat sheet steel.
3. Ductwork is fabricated from 18 gage G90 galvanized steel.
4. Glass used in the paint mix room meets and exceeds ANSI Z-97.1 standard.
5. Motors UL recognized PRGYZ.
6. Fire suppression system is NOT included with the standard booth but is required by NFPA-33.
7. Paint Mix Room air flow rate is 1150cfm.

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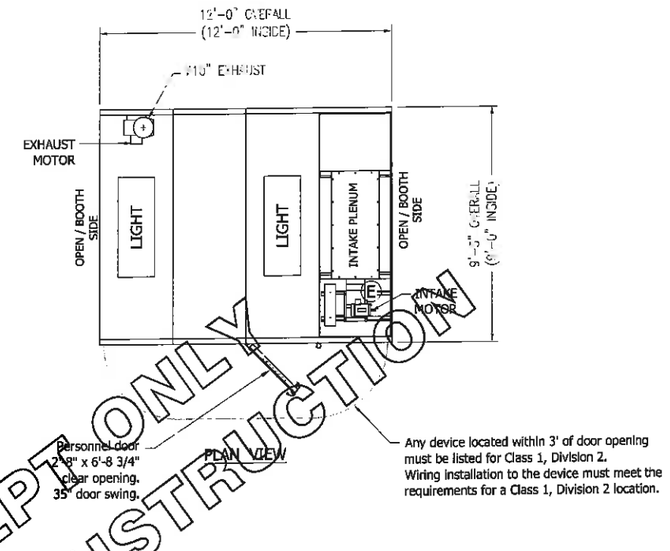
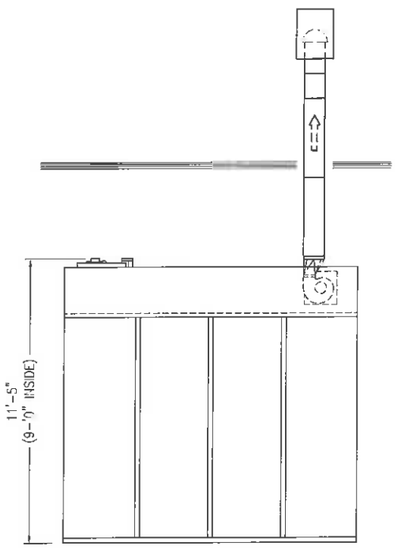
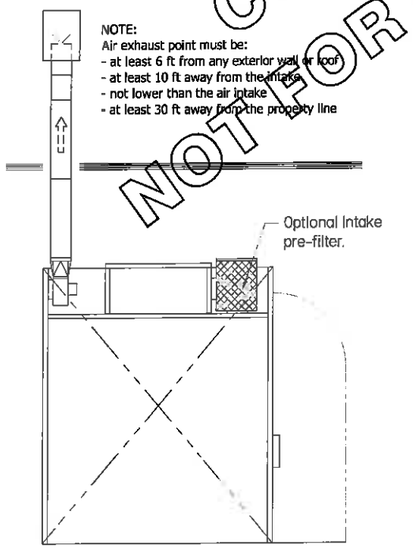


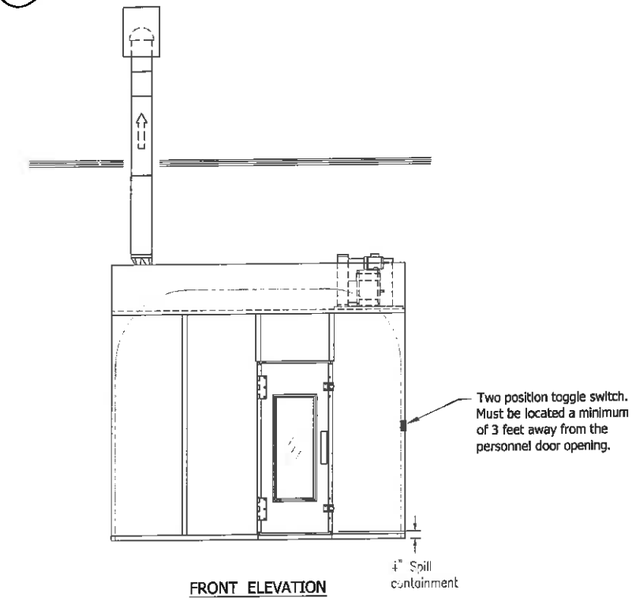
PLAN VIEW



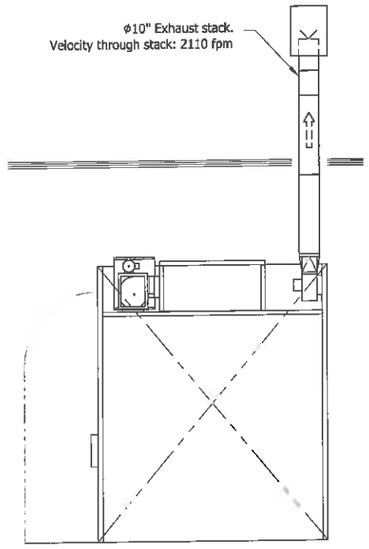
REAR ELEVATION



LH SIDE ELEVATION



FRONT ELEVATION



RH SIDE ELEVATION
OPEN SIDE OF MIX ROOM

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12731 NORWAY ROAD
OSSEO, WI 54758 USA
PHONE: 800-848-8738 OR 800-468-5872

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REV.: 4	DATE:	BY:	REV.: 8	DATE:	BY:	REV.: 12	DATE:	BY:	

GLOBAL FINISHING SOLUTIONS

DESCRIPTION: ULTRA XD - GENERAL ARRANGEMENT
UMR227 - 12'W x 9'L x 9'H WORKING AREA

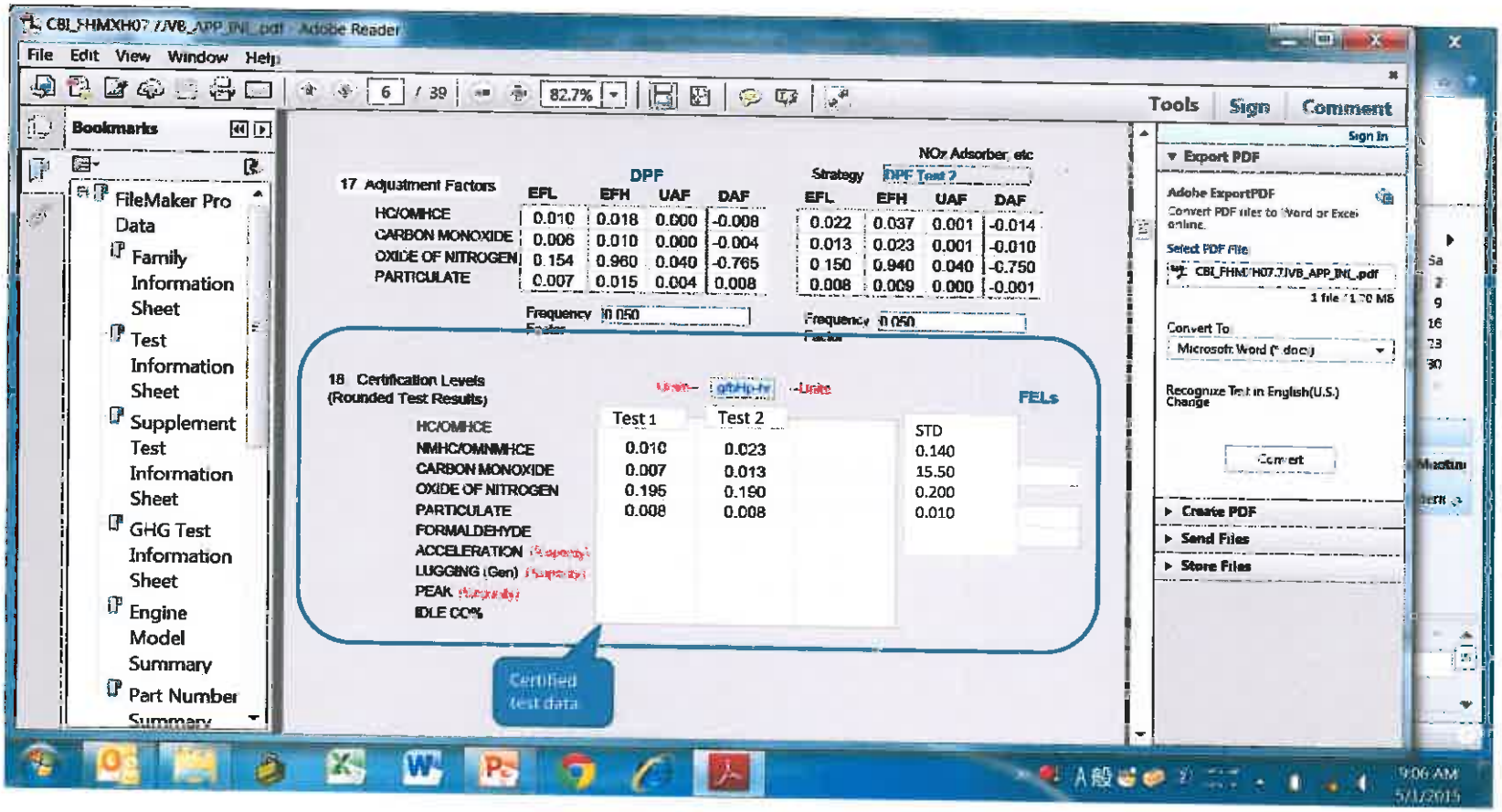
SCALE: 3/8" = 1'-0" | DRAWN BY: CRB | DATE: 12/31/2014 | REVIEWED BY | DATE

CUSTOMER: DHI for HINO TRUCK

MANUFACTURING LEVELS: CONCEPT

DRAWING NUMBER: DHI-HINOTRUCK-UMR

SHEET: 1 of 1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Tools Sign Comment
Bookmarks
FileMaker Pro Data
Family Information Sheet
Test Information Sheet
Supplement Test Information Sheet
GHG Test Information Sheet
Engine Model Summary
Part Number Summary
17 Adjustment Factors
DPF
NOx Adsorber, etc
Strategy
DPF Test 2
EFL EFH UAF DAF
HC/OMHCE 0.010 0.018 0.600 -0.008
CARBON MONOXIDE 0.006 0.010 0.000 -0.004
OXIDE OF NITROGEN 0.154 0.960 0.040 -0.765
PARTICULATE 0.007 0.015 0.004 0.008
EFL EFH UAF DAF
0.022 0.037 0.001 -0.014
0.013 0.023 0.001 -0.010
0.150 0.940 0.040 -0.750
0.008 0.009 0.000 -0.001
Frequency 0.050
Frequency 0.050
18 Certification Levels
(Rounded Test Results)
FELs
Test 1
Test 2
STD
HC/OMHCE 0.010 0.023 0.140
NMHC/OMNMHCE
CARBON MONOXIDE 0.007 0.013 15.50
OXIDE OF NITROGEN 0.195 0.190 0.200
PARTICULATE 0.008 0.008 0.010
FORMALDEHYDE
ACCELERATION
LUGGING (Gen)
PEAK
IDLE CO%
Certified test data
Export PDF
Adobe ExportPDF
Convert PDF files to Word or Excel online.
Select PDF File
CBI_FHM.7JVB_APP_INI_.pdf
Convert To
Microsoft Word (*.docx)
Recognize Text in English(U.S.)
Change
Convert
Create PDF
Send Files
Store Files
9:06 AM
5/1/2015

GENERAC EMERGENCY GENERATOR

Quietsource® Series

GENERAC®

QUIETSOURCE® SERIES
Standby Generators
Liquid-Cooled Gas Engine

Quietsource® Series

INCLUDES:

- Two Line LCD Tri-Lingual Digital Nexus™ Controller
- Isochronous Electronic Governor
- Sound Attenuated Enclosure
- Closed Coolant Recovery System
- Smart Battery Charger
- UV/Ozone Resistant Hoses
- ±1% Voltage Regulation
- Natural Gas or LP Operation
- 2 Year Limited Warranty
- UL 2200 Listed

Standby Power Rating

Model QT027 (Aluminum - Gray) - 27 kW 60 Hz
Model QT036 (Aluminum - Gray) - 36 kW 60 Hz
Model QT048 (Aluminum - Gray) - 48 kW 60 Hz

USA

QUIET TEST

Meets EPA Emission Regulations
22 & 27 kW are CA/MA emissions compliant
48 kW meets CA/MA emissions requirements with optional catalyst
36 kW not for sale in CA/MA

FEATURES

- **INNOVATIVE DESIGN & PROTOTYPE TESTING** are key components of GENERAC'S success in "IMPROVING POWER BY DESIGN." But it doesn't stop there. Total commitment to component testing, reliability testing, environmental testing, destruction and life testing, plus testing to applicable CSA, NEMA, EGSA, and other standards, allows you to choose GENERAC POWER SYSTEMS with the confidence that these systems will provide superior performance.

- **TEST CRITERIA:**
  - ✓ **PROTOTYPE TESTED**
  - ✓ **SYSTEM TORSIONAL TESTED**
  - ✓ **NEMA MG1-22 EVALUATION**
  - ✓ **MOTOR STARTING ABILITY**

- **SOLID-STATE, FREQUENCY COMPENSATED VOLTAGE REGULATION.** This state-of-the-art power maximizing regulation system is standard on all Generac models. It provides optimized FAST RESPONSE to changing load conditions and MAXIMUM MOTOR STARTING CAPABILITY by electronically torque-matching the surge loads to the engine. Digital voltage regulation at ±1%.

- **SINGLE SOURCE SERVICE RESPONSE** from Generac's extensive dealer network provides parts and service know-how for the entire unit, from the engine to the smallest electronic component.

- **GENERAC TRANSFER SWITCHES.** Long life and reliability are synonymous with GENERAC POWER SYSTEMS. One reason for this confidence is that the GENERAC product line includes its own transfer systems and controls for total system compatibility.

GENERAC®

Quietsource® Series

GENERAC®

22 • 27 • 36 • 48 kW

application & engineering data

GENERATOR SPECIFICATIONS

Type	Synchronous
Rotor Insulation Class	F (36 & 48 kW)
Stator Insulation Class	
Telephone Interference Factor (TIF)	<50
Alternator Output Leads 1-Phase	4 wire
Alternator Output Leads 3-Phase	
Bearings	Sealed Ball
Coupling	Flexible Disc
Excitation System	Direct

VOLTAGE REGULATION

Type	Electronic
Sensing	Single Phase
Regulation	± 1%

GOVERNOR SPECIFICATIONS

Type	Electronic
Frequency Regulation	Isochronous
Steady State Regulation	± 0.25%

ELECTRICAL SYSTEM

Battery Charge Alternator	12 Volt 30 Amp
Static Battery Charger	2 Amp
Recommended Battery	Group 26 (22, 27 & 36 kW) or Group 24F (48 kW), 525CCA
System Voltage	12 Volts

GENERATOR FEATURES

Revolving field heavy duty generator
Directly connected to the engine
Operating temperature rise 120 °C above a 40 °C ambient
Class H insulation is rated at 150 °C rise at 25 °C ambient
Class F insulation is rated at 145 °C rise at 25 °C ambient
All models fully prototyped tested

ENCLOSURE FEATURES

Aluminum weather protective enclosure	Ensures protection against mother nature. Electrostatically applied textured epoxy paint for added durability.
Enclosed critical grade muffler	Quiet, critical grade muffler is mounted inside the unit to prevent injuries.
Small, compact, attractive	Makes for an easy, eye appealing installation.
SAE	Sound attenuated enclosure ensures quiet operation.

ENGINE SPECIFICATIONS: 22, 27 & 36 kW

Make	
Model	In-line
Cylinders	4
Displacement (Liters)	2.4
Bore (in/mm)	3.41/86.5
Stroke (in/mm)	3.94/100
Compression Ratio	9.5:1
Intake Air System	Naturally Aspirated (22 & 27 kW) or Turbocharged/Aftercooled (36 kW)
Lifter Type	Hydraulic

ENGINE SPECIFICATIONS: 48 kW

Make	Generac
Model	V-Type
Cylinders	8
Displacement (Liters)	5.4
Bore (in/mm)	3.55/90.2
Stroke (in/mm)	4.17/105.9
Compression Ratio	9:1
Intake Air System	Naturally Aspirated
Lifter Type	Hydraulic

ENGINE LUBRICATION SYSTEM

Oil Pump Type	Gear
Oil Filter Type	Full flow spin-on cartridge
Crankcase Capacity (qt/l)	4/3.8 (22, 27 & 36 kW) or 6/5.7 (48 kW)

ENGINE COOLING SYSTEM

Type	Closed
Water Pump	Belt driven
Fan Speed (rpm)	1980 - 22 & 27 kW 1500 - 36 kW 1954 - 48 kW
Fan Diameter (in/mm)	18.1/459.7 (22 & 27 kW) or 22/558.8 (36 & 48 kW)
Fan Mode	Pusher (22 & 27 kW) or Puller (36 & 48 kW)

FUEL SYSTEM

Fuel Type	propane vapor
Carburetor	Down Draft
Secondary Fuel Regulator	Standard
Fuel Shut Off Solenoid	Standard
Operating Fuel Pressure	5-14" water column/9-26 mm HG

(All ratings in accordance with BS5514, ISO3046, ISO8528, SAE J1349 and DIN6271)

22 • 27 • 36 • 48 kW

operating data

GENERATOR OUTPUT VOLTAGE/kW - 60 Hz

		kW LPG	Amp LPG	kW Nat. Gas	Amp Nat. Gas	CB Size (Both)
QT022	120/240 V, 1Ø, 1.0 pf	22	92	22	92	100
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	120/240 V, 3Ø, 0.8 pf	22	66	22	66	80
QT027	120/240 V, 1Ø, 1.0 pf	27	113	25	104	125
	120/208 V, 3Ø, 0.8 pf	27	94	25	87	100
	120/240 V, 3Ø, 0.8 pf	27	81	25	75	90
QT036	120/240 V, 1Ø, 1.0 pf	36	150	35	146	175
	120/208 V, 3Ø, 0.8 pf	36	125	35	121	150
	120/240 V, 3Ø, 0.8 pf	36	108	35	105	125
	277/480 V, 3Ø, 0.8 pf	36	54	35	53	60
QT048	120/240 V, 1Ø, 1.0 pf	48	200	48	200	200
	120/208 V, 3Ø, 0.8 pf	48	166.5	48	166	175
	120/240 V, 3Ø, 0.8 pf	48	144	48	144	150
	277/480 V, 3Ø, 0.8 pf	48	72	48	72	80

SURGE CAPACITY IN AMPS

		Voltage Dip @ < .4 pf	
		15%	30%
QT022	120/240 V, 1Ø	89	216
	[illegible]	[illegible]	[illegible]
	120/240 V, 3Ø	64	156
QT027	120/240 V, 1Ø	109	265
	120/208 V, 3Ø	91	221
	120/240 V, 3Ø	79	192
QT036	120/240 V, 1Ø	54	149
	120/208 V, 3Ø	87	210
	120/240 V, 3Ø	75	182
	277/480 V, 3Ø	36	87
QT048	120/240 V, 1Ø	69	189
	120/208 V, 3Ø	111	269
	120/240 V, 3Ø	96	233
	277/480 V, 3Ø	43	104

ENGINE FUEL CONSUMPTION

		Natural Gas		Propane	
		(ft^3/hr)	(m^3/hr)	(gal/hr)	(l/hr)
[illegible]	Exercise cycle	42	1.2	0.44	1.7
	25% of rated load	100	2.8	1.1	4.2
	50% of rated load	190	5.4	2.1	7.8
	75% of rated load	255	7.2	2.8	10.5
	100% of rated load	316	9	3.4	13
QT027	Exercise cycle	42	1.2	0.44	1.7
	25% of rated load	108	3.1	1.2	4.5
	50% of rated load	197	5.6	2.1	8.1
	75% of rated load	287	8.2	3.1	11.8
	100% of rated load	359	10.2	3.9	14.8
QT036	Exercise cycle	48	1.4	0.5	2
	25% of rated load	156	4.4	1.7	6.4
	50% of rated load	282	8	3.1	11.6
	75% of rated load	392	11.1	4.3	16.2
	100% of rated load	503	14.3	5.5	20.8
QT048	Exercise cycle	95	2.7	1	3.9
	25% of rated load	204	5.8	2.16	8.5
	50% of rated load	392	11.1	4.14	15.7
	75% of rated load	547	15.5	5.8	22.8
	100% of rated load	756	21.5	7.96	31.3

Note: **Fuel pipe must be sized for full load.**

For Btu content, multiply gal/hr x 90950 (LP) or ft^3/hr x 1000 (NG)

For megajoule content, multiply l/hr x 25.35 (LP) or m^3/hr x 37.26 (NG)

Refer to "Emissions Data Sheets" for maximum fuel flow for EPA and SCAQMD permitting purposes.

STANDBY RATING: Standby ratings apply to installations served by a reliable utility source. The standby rating is applicable to varying loads for the duration of a power outage. There is no overload capability for this rating. Ratings are in accordance with ISO-3046-1. Design and specifications are subject to change without notice.

GENERAC

22 • 27 • 36 • 48 kW

operating data

ENGINE COOLING

	22 kW	27 kW	36 kW	48 kW
Air flow (inlet air including alternator and combustion air in cfm/cmm)	2400/68	2400/68	2200/62.3	4350/123.2
System coolant capacity (gal/liters)	3/11.4	3/11.4	2.5/9.5	3/11.4
Heat rejection to coolant (BTU per hr/MJ per hr)	99,000/104.5	105,000/110.8	145,000/153	186,000/196.2
Maximum operation air temperature on radiator (°C/°F)	60/150			
Maximum ambient temperature (°C/°F)	50/140			

COMBUSTION REQUIREMENTS

Flow at rated power (cfm/cmm)	68/1.9	68/1.9	106/3	163/4.6

SOUND EMISSIONS

Sound output in dB(A) at 23 ft (7 m) with generator in exercise mode*	61	61	58	63
Sound output in dB(A) at 23 ft (7 m) with generator operating at normal load*	70	70	64	68

*Sound levels are taken from the front of the generator. Sound levels taken from other sides of the generator may be higher depending on installation parameters.

EXHAUST

Exhaust flow at rated output (cfm/cmm)	165/4.7	180/5.1	300/8.5	414/11.7
Exhaust temperature at muffler outlet (°C/°F)	482/900	538/1000	579/1075	552/1025

ENGINE PARAMETERS

Rated Synchronous rpm	1800

POWER ADJUSTMENT FOR AMBIENT CONDITIONS

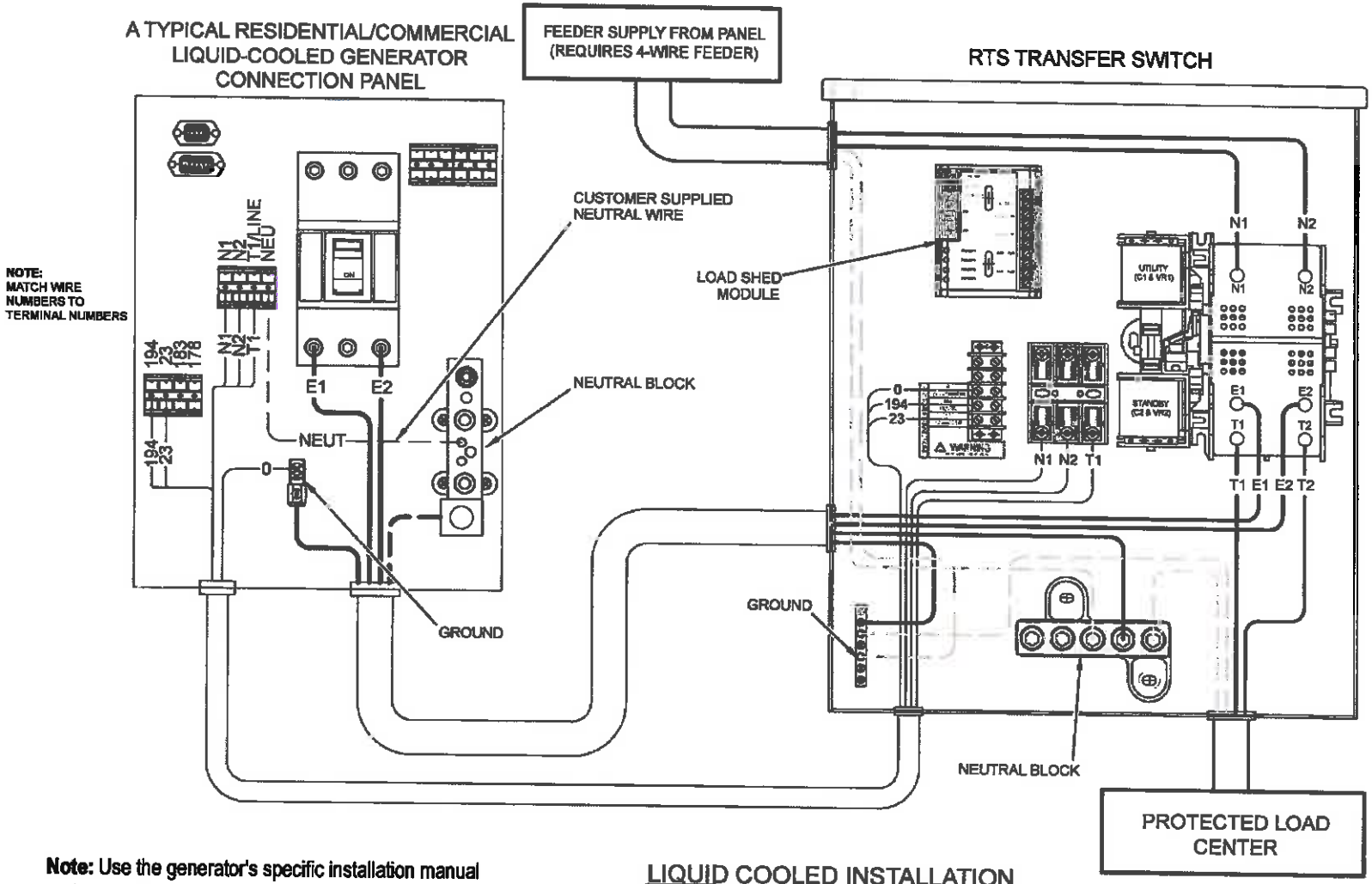
Temperature Deration ..... 3% for every 10 °C above 25 °C or 1.65% for every 10 °F above 77 °F
Altitude Deration (22, 27 & 48 kW) ..... 1% for every 100 m above 183 m or 3% for every 1000 ft above 600 ft
Altitude Deration (36 kW) ..... 1% for every 100 m above 915 m or 3% for every 1000 ft above 3000 ft

CONTROLLER FEATURES

2-Line Plain Text LCD Display ..... Simple user interface for ease of operation.
Mode Switch: Auto ..... Automatic Start on Utility failure. 7 day exerciser
Off ..... Stops unit. Power is removed. Control and charger still operate.
Manual ..... Start with starter control, unit stays on. If utility fails, transfer to load takes place.
Programmable start delay between 10-30 seconds ..... Standard
Engine Start Sequence ..... Cyclic cranking: 16 sec on, 7 rest (90 sec maximum duration)
Engine Warm-up ..... 5 sec
Engine Cool-Down ..... 1 min
Starter Lock-out ..... Starter cannot re-engage until 5 sec after engine has stopped.
Smart Battery Charger ..... Standard
Automatic Voltage Regulation with Over and Under Voltage Protection ..... Standard
Automatic Low Oil Pressure Shutdown ..... Standard
Overspeed Shutdown ..... Standard, 72 Hz
High Temperature Shutdown ..... Standard
Overcrank Protection ..... Standard
Safety Fused ..... Standard
Failure to Transfer Protection ..... Standard
Low Battery Protection ..... Standard
50 Event Run Log ..... Standard
Future Set Capable Exerciser ..... Standard
Incorrect Wiring Protection ..... Standard
Internal Fault Protection ..... Standard
Common External Fault Capability ..... Standard
Governor Failure Protection ..... Standard

22 • 27 • 36 • 48 kW available accessories

Model #	Product	Description
005630-0 - 22, 27 & 36 kW 005632-0 - 48 kW	Cold Weather Kit	If the temperature regularly falls below 32 °F (0 °C), install a cold weather kit to maintain optimal battery temperature. Kit consists of battery warmer with thermostat built into the wrap.
005616-0 - 22, 27 & 36 kW 006204-0 - 48 kW	Extreme Cold Weather Kit	Recommended where the temperature regularly falls below 32 °F (0 °C) for extended periods of time. For liquid cooled units only.
005621-0	Auxiliary Transfer Switch Contact Kit	The auxiliary transfer switch contact kit allows the transfer switch to lock out a single large electrical load you may not need.
005651-0	Base Plug Kit	Add base plugs to the base of the generator to keep out debris.
005704-0	Paint Kit	If the generator enclosure is scratched or damaged, it is important to touch-up the paint to protect from future corrosion. The paint kit includes the necessary paint to properly maintain or touch-up a generator enclosure.
005656-0 - 22 & 27 kW 005984-0 - 36 kW 006205-0 - 48 kW	Scheduled Maintenance Kit	The Liquid-Cooled Scheduled Maintenance Kits offer all the hardware necessary to perform complete maintenance on Generac liquid-cooled generators.
005928-0	Wireless Remote	Completely wireless and battery powered, Generac's wireless remote monitor provides you with instant status information without ever leaving the house.
005951-0	Advanced Wireless Remote	Remotely control generator functions with the advanced model's LCD display. In addition to remote testing of the generator, set the exercise cycle and maintenance interval reminders.
006199-0	PMM Starter Kit	The PMM Starter Kit consists of a 24 VAC, field installed transformer that enables the use of the 24 VAC Power Management Modules (PMMs) and one PMM. The standard controller (without starter kit) can control two HVAC loads with no additional hardware. Not compatible with pre-wired switches.
006186-0	Power Management Module (50 Amps)	Power Management Modules are used in conjunction with the Smart Switch to increase its power management capabilities. It gives the Smart Switch additional power management flexibility not found in any other transfer switch. Not compatible with pre-wired switches. Note: PMM Starter Kit required.
006463-1	Mobile Link™	Generac's Mobile Link allows you to check the status of your generator from anywhere that you have access to an Internet connection from a PC or with any smart device. You will even be notified when a change in the generator's status occurs via e-mail or text message. Note: Harness Adapter Kit required.
006478-0	Harness Adapter Kit	The Harness Adapter Kit is required to make liquid-cooled units compatible with Mobile Link™.



Note: Use the generator's specific installation manual and wiring diagrams to verify generator wiring connections, as they may differ slightly from illustration.

LIQUID COOLED INSTALLATION

BATTERY 12 VOLT
GROUP 26 525
COLD CRANKING AMPS

NOTES:

1) MINIMUM RECOMMENDED CONCRETE PAD SIZE:1041 (41.0") WIDE X 1892 (74 1/2") LONG.REFERENCE INSTALLATION GUIDE SUPPLIED WITH UNIT FOR CONCRETE PAD GUIDELINES

2) ALLOW SUFFICIENT ROOM ON ALL SIDES OF THE GENERATOR FOR MAINTENANCE AND SERVICING, THIS UNIT MUST BE INSTALLED IN ACCORDANCE WITH CURRENT APPLICABLE NFPA 37 AND NFPA 70 STANDARDS AS WELL AS ANY OTHER FEDERAL, STATE AND LOCAL CODES FOR MINIMUM DISTANCES FROM OTHER STRUCTURES

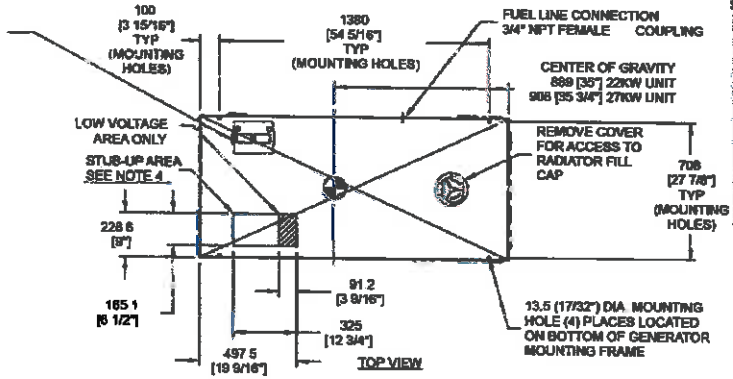
3) CIRCUIT BREAKER INFORMATION:
SEE SPECIFICATION SHEET WITHIN OWNERS MANUAL.

4) INSIDE STUB-UP AREA FOR AC LOAD LEAD CONDUIT CONNECTION, NEUTRAL CONNECTION, BATTERY CHARGER 120 VOLT AC (0.5 AMP MAX.) CONNECTION, ACCESS TO TRANSFER SWITCH CONTROL WIRES, AND TRANSFER SWITCH CONNECTION (IF SO EQUIPPED) REMOVE FRONT COVER FOR ACCESS

4A) ONE 1-1/2" NEMA ELECTRICAL KNOCKOUT AND TWO 1/2" NEMA ELECTRICAL KNOCKOUTS PROVIDED FOR OUTSIDE AC LOAD CONDUIT CONNECTION, NEUTRAL CONNECTION, BATTERY CHARGER 120 VOLT AC (0.5 AMP MAX.) CONNECTION, ACCESS TO TRANSFER SWITCH CONTROL WIRES, AND TRANSFER SWITCH CONNECTION (IF SO EQUIPPED). REMOVE FRONT COVER FOR ACCESS

5) REFERENCE OWNERS MANUAL FOR LIFTING WARNINGS

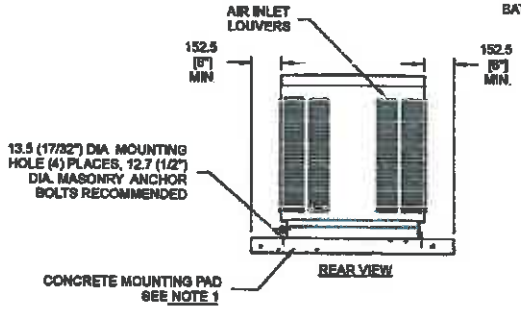
6) REMOVE LIFT-OFF ENCLOSURE TO ACCESS EXHAUST MUFFLER

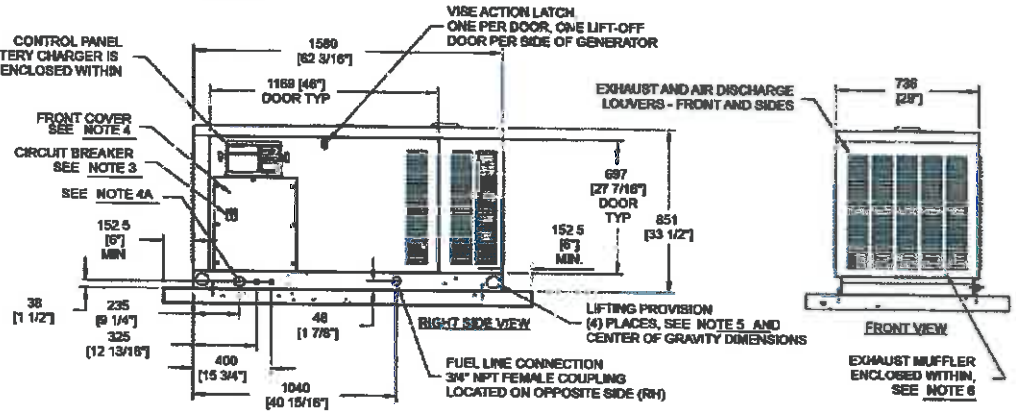


SERVICE ITEM ACCESSIBILITY CHART

SERVICE ITEM	ACCESS
OIL FILL CAP	THRU RIGHT DOOR
OIL DIP STICK	THRU RIGHT DOOR
OIL FILTER	THRU RIGHT DOOR
OIL DRAIN HOSE	THRU LEFT DOOR
RADIATOR DRAIN HOSE	THRU LEFT DOOR
AIR CLEANER ELEMENT	THRU LEFT DOOR
SPARK PLUGS	THRU LEFT DOOR
MUFFLERS	SEE NOTE 6
FAN BELT	THRU RIGHT DOOR
BATTERY	THRU LEFT DOOR

REFERENCE OWNERS MANUAL
FOR PERIODIC REPLACEMENT
PART LISTINGS





[illegible]				
[illegible]	ENCLOSURE MATERIAL	WEIGHT (GENSET ONLY) KG [LBS]	WEIGHT (SHIPPING CARTON/SKID) KG [LBS]	SHIPPING WEIGHT (GENSET,SKID,ACCESSORIES) KG [LBS]
[illegible]	ALUMINUM	363 [800]	399 [880]	413 [910]
[illegible]	ALUMINUM	400 [881]		[illegible]

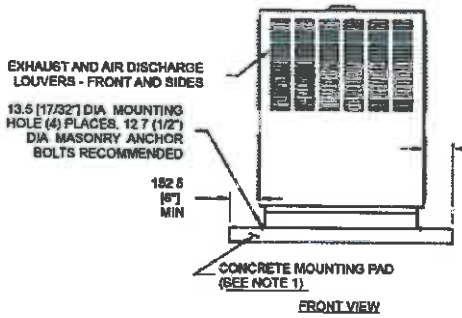
WEIGHT DATA			
ENCLOSURE MATERIAL	WEIGHT (GENSET ONLY) KG [LBS]	WEIGHT (WOODEN SHIPPING CRATE/SKID) KG [LBS]	SHIPPING WEIGHT (SKID AND GENSET) KG [LBS]
ALUMINUM	577 [1271]	44 [98]	621 [1369]

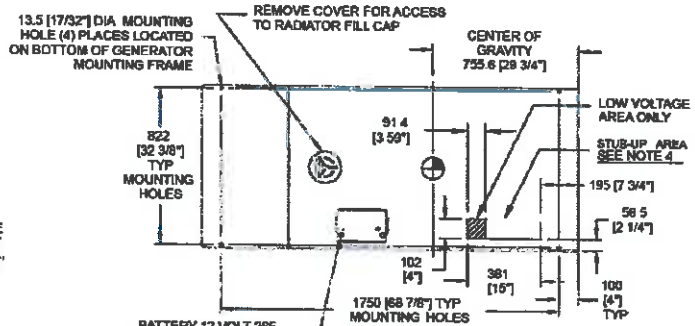
NOTES:

1) MINIMUM RECOMMENDED CONCRETE PAD SIZE:1155 [45 1/2"] WIDE X 2255 [88 7/8"] LONG REFERENCE INSTALLATION GUIDE SUPPLIED WITH UNIT FOR CONCRETE PAD GUIDELINES
2) ALLOW SUFFICIENT ROOM ON ALL SIDES OF THE GENERATOR FOR MAINTENANCE AND SERVICING. THIS UNIT MUST BE INSTALLED IN ACCORDANCE WITH CURRENT APPLICABLE NFPA 37 AND NFPA 70 STANDARDS AS WELL AS ANY OTHER FEDERAL, STATE AND LOCAL CODES FOR MINIMUM DISTANCES FROM OTHER STRUCTURES
3) CIRCUIT BREAKER INFORMATION: SEE SPECIFICATION SHEET WITHIN OWNERS MANUAL
4) INSIDE STUB-UP AREA FOR AC LOAD LEAD CONDUIT CONNECTION, NEUTRAL CONNECTION, BATTERY CHARGER 120 VOLT AC (5 AMP MAX) CONNECTION, AND ACCESS TO TRANSFER SWITCH CONTROL WIRES. REMOVE FRONT COVER FOR ACCESS

4A) FIELD CUT HOLE IS ONLY REQUIRED FOR MOUNTING OF GENERATOR ON AN EXISTING PAD

5) REFERENCE OWNERS MANUAL FOR LIFTING WARNINGS.
6) REMOVE EITHER LEFT OR RIGHT HAND SIDE PANEL TO ACCESS EXHAUST MUFFLER AND FAN BELT.

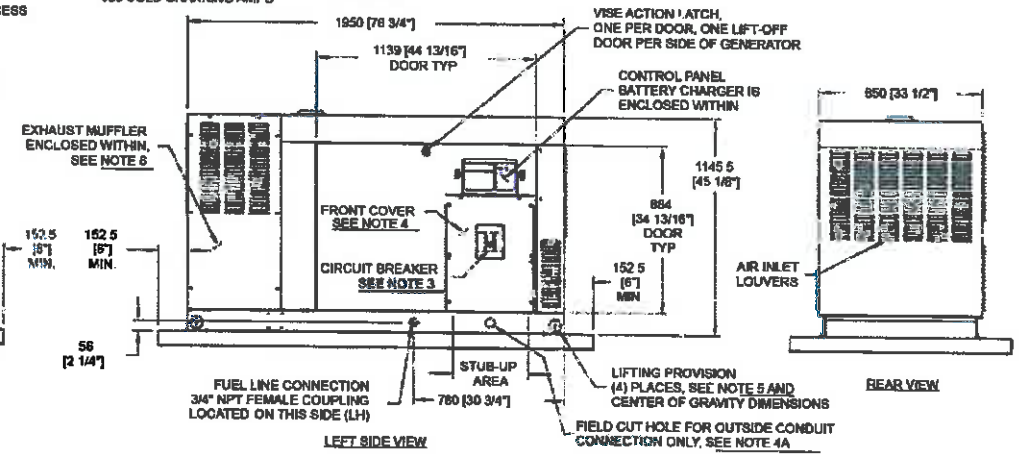




SERVICE ITEM ACCESSIBILITY CHART

SERVICE ITEM	24L
OIL FILL CAP	EITHER DOOR
OIL DIP STICK	THRU RIGHT DOOR
OIL FILTER	THRU RIGHT DOOR
OIL DRAIN HOSE	THRU RIGHT DOOR
RADIATOR DRAIN HOSE	THRU LEFT DOOR
AIR CLEANER ELEMENT	THRU RIGHT DOOR
SPARK PLUGS	THRU LEFT DOOR
MUFFLER	SEE NOTE 6
FAN BELT	SEE NOTE 6
BATTERY	THRU LEFT DOOR

REFERENCE OWNERS MANUAL FOR PERIODIC REPLACEMENT PART LISTINGS



WEIGHT DATA		
WEIGHT (GENSET ONLY) KG (LBS)	WEIGHT (WOODEN SHIPPING CRATE/SKID) KG (LBS)	SHIPPING WEIGHT (SKID AND GENSET) KG (LBS)
668 [1516]	44 [10]	732 [1614]

NOTES:

1) MINIMUM RECOMMENDED CONCRETE PAD SIZE:1155 (45 5") WIDE X 2256 (88 8") LONG REFERENCE INSTALLATION GUIDE SUPPLIED WITH UNIT FOR CONCRETE PAD GUIDELINES.

2) ALLOW SUFFICIENT ROOM ON ALL SIDES OF THE GENERATOR FOR MAINTENANCE AND SERVICING. THIS UNIT MUST BE INSTALLED IN ACCORDANCE WITH CURRENT APPLICABLE NFPA 37 AND NFPA 70 STANDARDS AS WELL AS ANY OTHER FEDERAL, STATE AND LOCAL CODES FOR MINIMUM DISTANCES FROM OTHER STRUCTURES

3) CIRCUIT BREAKER INFORMATION:
SEE SPECIFICATION SHEET WITHIN OWNERS MANUAL

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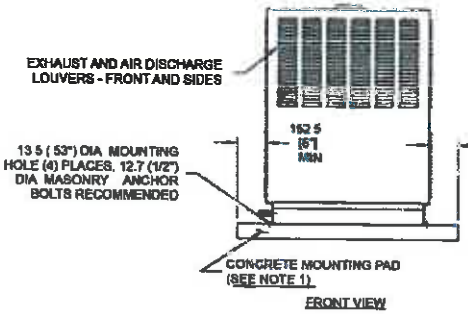
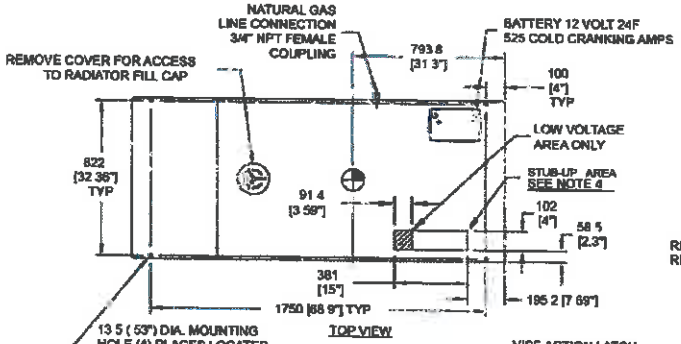
5) REFERENCE OWNERS MANUAL FOR LIFTING WARNINGS.

6) REMOVE EITHER LEFT OR RIGHT HAND SIDE PANEL TO ACCESS EXHAUST MUFFLER AND FAN BELT.



FRONT VIEW



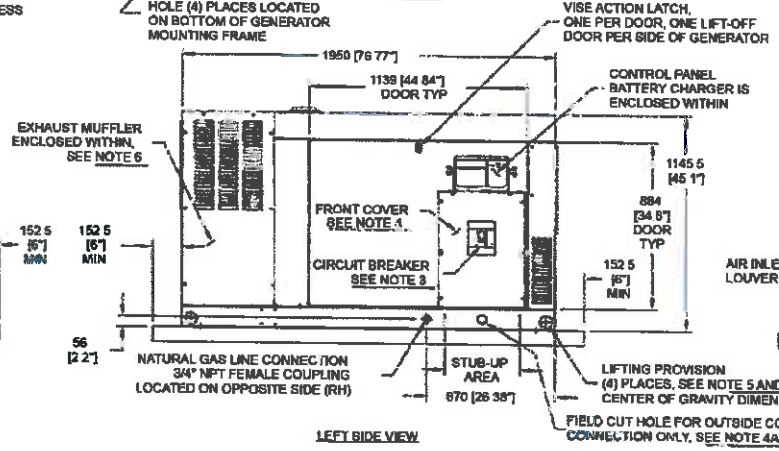
TOP VIEW

BATTERY 12 VOLT 24F
525 COLD CRANKING AMPS

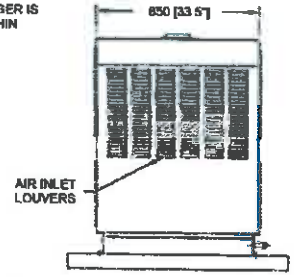
SERVICE ITEM ACCESSIBILITY CHART

SERVICE ITEM	
OIL FILL CAP	THRU RIGHT DOOR
OIL DIP STICK	THRU LEFT DOOR
OIL FILTER	THRU LEFT DOOR
OIL DRAIN HOSE	THRU RIGHT DOOR
RADIATOR DRAIN HOSE	THRU LEFT DOOR
AIR CLEANER ELEMENT	BOTH DOORS
SPARK PLUGS	BOTH DOORS
MUFFLER	SEE NOTE 6
FAN BELT	SEE NOTE 4
BATTERY	THRU RIGHT DOOR

REFERENCE OWNERS MANUAL FOR PERIODIC REPLACEMENT PART LISTINGS



LEFT SIDE VIEW



REAR VIEW

Quietsource® Series

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Bulletin 0199360SR-C Printed in U.S.A. 11/2013

Generac Power Systems, Inc. • S45 W29290 HWY. 59, Waukesha, WI 53189 • generac.com

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
2014 MODEL YEAR
CERTIFICATE OF CONFORMITY
WITH THE CLEAN AIR ACT OF 1990

OFFICE OF TRANSPORTATION AND AIR QUALITY
ANN ARBOR, MICHIGAN 48105

Certificate Issued To: **Generac Power Systems, Inc.**
(U.S. Manufacturer or Importer)

Certificate Number: **EGNXB02.42NN-009**

Effective Date: 11/21/2013

Expiration Date: 12/31/2014

Byron J. Bunker, Division Director
Compliance Division

Issue Date: 11/21/2013

Revision Date: N/A

Manufacturer: Generac Power Systems, Inc.
Engine Family: EGNXB02.42NN
Certificate Number: EGNXB02.42NN-009
Certification Type: Stationary (Part 60)
Fuel : Natural Gas (CNG/LNG)
Emission Standards : HC + NOx (g/kW-hr) : 13.4
NMHC + NOx (g/kW-hr) : 13.4
CO (g/kW-hr) : 519
Emergency Use Only : Y

Pursuant to Section 213 of the Clean Air Act (42 U.S.C. section 7547) and 40 CFR Part 60, 1065, 1068, and 60 (stationary only and combined stationary and mobile) and subject to the terms and conditions prescribed in those provisions, this certificate of conformity is hereby issued with respect to the test engines which have been found to conform to applicable requirements and which represent the following nonroad engines, by engine family, more fully described in the documentation required by 40 CFR Part 60 and produced in the stated model year.

This certificate of conformity covers only those new nonroad spark-ignition engines which conform in all material respects to the design specifications that applied to those engines described in the documentation required by 40 CFR Part 60 and which are produced during the model year stated on this certificate of the said manufacturer, as defined in 40 CFR Part 60. This certificate of conformity does not cover nonroad engines imported prior to the effective date of the certificate.

It is a term of this certificate that the manufacturer shall consent to all inspections described in 40 CFR 1068.20 and authorized in a warrant or court order. Failure to comply with the requirements of such a warrant or court order may lead to revocation or suspension of this certificate for reasons specified in 40 CFR Part 60. It is also a term of this certificate that this certificate may be revoked or suspended or rendered void *ab initio* for other reasons specified in 40 CFR Part 60.

This certificate does not cover large nonroad engines sold, offered for sale, or introduced, or delivered for introduction into commerce in the U.S. prior to the effective date of the certificate.

Patrick E. Ward

From: Natasha Merkes <Natasha.Merkes@generac.com> on behalf of Customer Support <customersupport@generac.com>
Sent: Wednesday, May 13, 2015 2:01 PM
To: Patrick E. Ward
Subject: FW: Emissions information
Attachments: Cert_EGNXB02.42NN-009.pdf

Emission data for the QT02224GNAX, 2.4L QT022, NG, no catalyst are as follows:

- THC: 2.34 g/hp-hr
- NOx: 2.15 g/hp-hr
- CO: 101.28 g/hp-hr

Also attached is the 2014 EPA Certificate for that unit.

Tell me how I'm doing!
Please take a moment and follow the below link to take a short survey and rate yourexperience with me today.
By participating, you will be entered to win a $500 American Express giftcard! Thank you for your feedback!
http://tiny.cc/GeneracExperienceNM

Thank you,

Natasha
Customer Support
Generac Power Systems
Ph: 1-888-GENERAC (436-3722)

From: Amanda Olivares **On Behalf Of** Customer Support
Sent: Friday, May 08, 2015 7:37 AM
To: Anthony Diab
Subject: FW: Emissions information

Good Morning,

Can I also have the emissions information for this unit?

SERIAL NUMBER: 9183090
MODEL NUMBER: QT02224GNAX
PRODUCTION DATE: 9/19/2014

INSTALLED IN: West Virginia

Thank you so much

Amanda

From: Rachell Olsen
Sent: Thursday, May 07, 2015 10:54 AM
To: Customer Support
Subject: RE: Emissions information

I think he is the installer

Thank you,

Rachell L Olsen
Customer Support
Generac Power Systems, Inc.
Ph: 888-GENERAC (436-3722)
Fax: 262-544-4854

Tell us how we're doing! Please take a moment and follow the below link to take a short survey and rate you experience with us today. By participating, you will be entered to win a $500 American Express giftcard! Thank you for your feedback!

http://tiny.cc/GeneracExperienceRO

From: Amanda Olivares **On Behalf Of** Customer Support
Sent: Thursday, May 07, 2015 10:52 AM
To: Rachell Olsen
Subject: RE: Emissions information

Hello,

Can you please confirm the information is correct? This unit is not registered to a Patrick, and the phone numbers do not match.

From: Rachell Olsen
Sent: Thursday, May 07, 2015 10:37 AM
To: Customer Support
Subject: Emissions information

Hey,

Patrick needs the emissions information for his unit sn 9183090.

Phone: 304-342-1400

Email: peward@potesta.com

Thank you,

Rachell L Olsen
Customer Support
Generac Power Systems, Inc.
Ph: 888-GENERAC (436-3722)
Fax: 262-544-4854

Tell us how we're doing! Please take a moment and follow the below link to take a short survey and rate you experience with us today. By participating, you will be entered to win a $500 American Express giftcard! Thank you for your feedback!

http://tiny.cc/GeneracExperienceRO

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EXISTING BUILDING HEATERS

WORK ORDER

TRI-STATE ROOFING & SHEET METAL

DAVISVILLE, WEST VIRGINIA

Job No. _____ **Date** 5-18-15

Name of Job Hino **Date Needed:** _____

Specifications BTU / unit HVAC water Heater & Generato.

SHOW ALL DIMENSIONS CLEARLY - LIST ALL MATERIALS USED

16 Units 1 - 16
800,000 In BTU
648,000 out

3 Units 16 17 18 & 19
250,000 In BTU
202,000 OUT

1 Unit 20
120,000 In BTU
97,200 OUT

2 NEW Lennox units
150,000 In BTU
120,600 OUT BTU

1 REZNOR MAU OIL Room
250,000 In BTU
200,000 OUT

3 Dock AREA Heaters
250000 BTU In
200000 out

1 150,000 In BTU
120,000 OUT

1 ELECTRIC
170600 In
136000 out

1 Compressor Room
170000 In
136000 out

1 water Heater
76,500 BTU

1 GENERATOR
315000 BTU
at FULL Load

TSRC-W3

FILE COPY

PROPOSED BUILDING HEATERS

Submittal

Trane U.S. Inc.

Prepared For:
<customer>
<company>

Sold To:

Date: 1/28/2015

Customer P.O. Number:
Customer Project Number:

Job Number:
Job Name: Hino Expansion

Trane is pleased to provide the enclosed submittal for your review and approval.

Product Summary

Qty	Model Description
1	Horizon™ - Packaged curb mounted multi-function heating, cooling and ventilation unit

The attached information describes the equipment we propose to furnish for this project and is submitted for your approval.

Product Data - Packaged curb mounted multi-function heating, cooling and ventilation unit

Size	Qty	Description	Model Number
N540	1	Packaged curb mounted multi-function heating, cooling and ventilation unit	OAND540A4-D10000JT-A0R0000000-000B00000

Tag(s): MUA-1

Unit Voltage: 460-3-60
Evaporator Coil: DX 6 Row Interlaced
Hot Gas Reheat: Modulating
Heat Type: Indirect - Fired (IF)
439 Stainless Steel Furnace: 1000 Mbtu/h, (20:1 Turndown NG, 16:1 Turndown LP)
Filters: MERV-8
Supply Discharge Air Sensor (FLD)
2 inch Double Wall Construction
Stainless Steel Drip Pan
Blower HP - 10
Blower RPM - 2334
Supply Fan - CM3TC200.0

Tag: MUA-1 Comments:

Unit Information

Model:	Horizon™	Unit Length:	197 in	Weight Operating:	5164 lb*
Size:	N540	Unit Width:	101 in	*Note: Weight does not include CURB weight. See CURB submittal for actual*	
Quantity:	1	Unit Height:	93 in		
Supply Airflow:	10,000 CFM	Elevation:	0 ft	**Refrigerant Charge**	
Outside Airflow:	10,000 CFM	Ambient Air DB:	95 F	Circuit 1:	40.62 lbs
				Circuit 2:	60.16 lbs

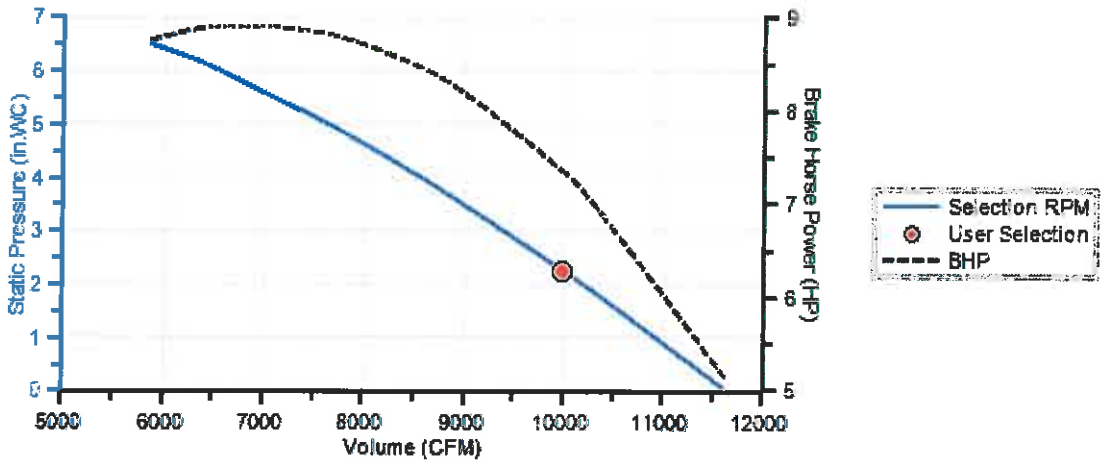
Cooling Performance

Gross Total Capacity:	484.2 MBh	Evaporator Face Area:	28.6 sq ft
Gross Sensible Capacity:	316.3 MBh	Evaporator Rows / FPI:	6 / 12
Net Total Capacity:	465.6 MBh	Condenser Face Area:	59.6 sq ft
Net Sensible Capacity:	297.7 MBh	Condenser Rows / FPI :	3 / 12
Entering Air DB / WB (Coil):	85 / 71 F	Air Velocity:	349 fpm
Leaving Air DB / WB (Coil):	56.3 / 56.3 F	Coil Air PD:	0.31 in H2O
Leaving Air DB / WB (Reheat):	65.84 / 59.96 F	EER:	9.9
Leaving Air DB / WB (Unit):	67.9 / 60.7 F	Watts:	47269

Heating Performance

Heat Type:	Gas Furnace	Entering Air DB:	0 F
Input Capacity	1000 MBh	Leaving Air DB:	74.1 F
Output Capacity:	800 MBh	Coil Air PD:	0.58 in H2O

Supply Fan CM3TC200.0



Supply Pressure Drop Summary

External Static Pressure:	1.00 in H2O
Internal Pressure Drop:	1.25 in H2O
Total Static Pressure:	2.25 in H2O

Supply Fan Conditions

Fan Motor BHP:	7.32 BHP
Operating RPM:	2334 RPM
Minimum RPM:	1650 RPM

Unit Electrical Data

Unit Voltage-Ph-Hz:	**460-3-60**	Min Circuit Ampacity - MCA:	**96.7** Amps
Unit Amps - FLA:	**90.9** Amps	Maximum Fuse Size - MFS:	**110** Amps

Electrical Summary

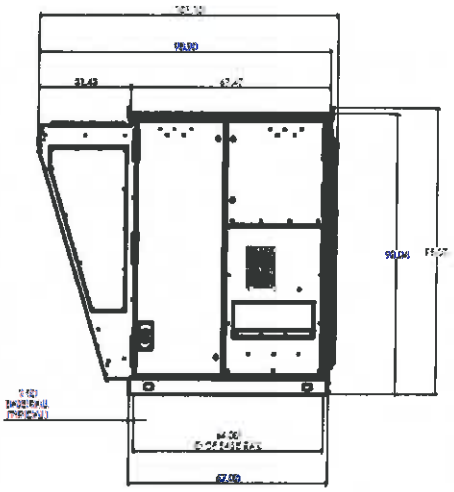
Component	Fan Service	Qty	HP (ea.)	FLA (ea.)	RLA (ea.)	LRA (ea.)
Scroll		**1**			**23**	**158**
Scroll		**2**			**23**	**158**
	Supply	**1**	**10**	**12.5**		
	Condenser	**4**	**1**	**2.1**		
Controls		**1**		**1**		

Notes

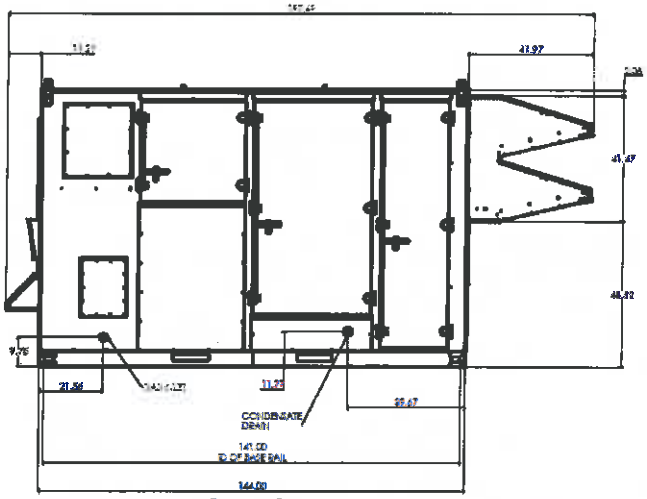
1. See option list schedule for selected options.
2. See catalog for dimension and weight
3. For single point power connection, Unit Electrical amps include the greater of compressor or electrical heat amps
4. For dual point power connections (electrical heat), Unit Electrical Data does not include electric heat power requirements

Unit Dimensions - 30-54 Ton R-410A PKGD Unitary Cooling Rooftop

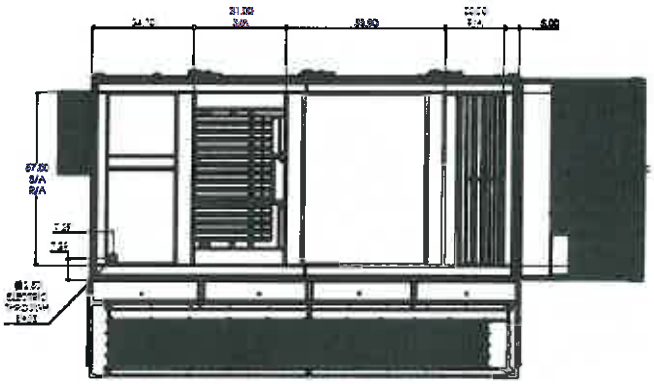
Qty: 1 Tags: MUA-1



Front View



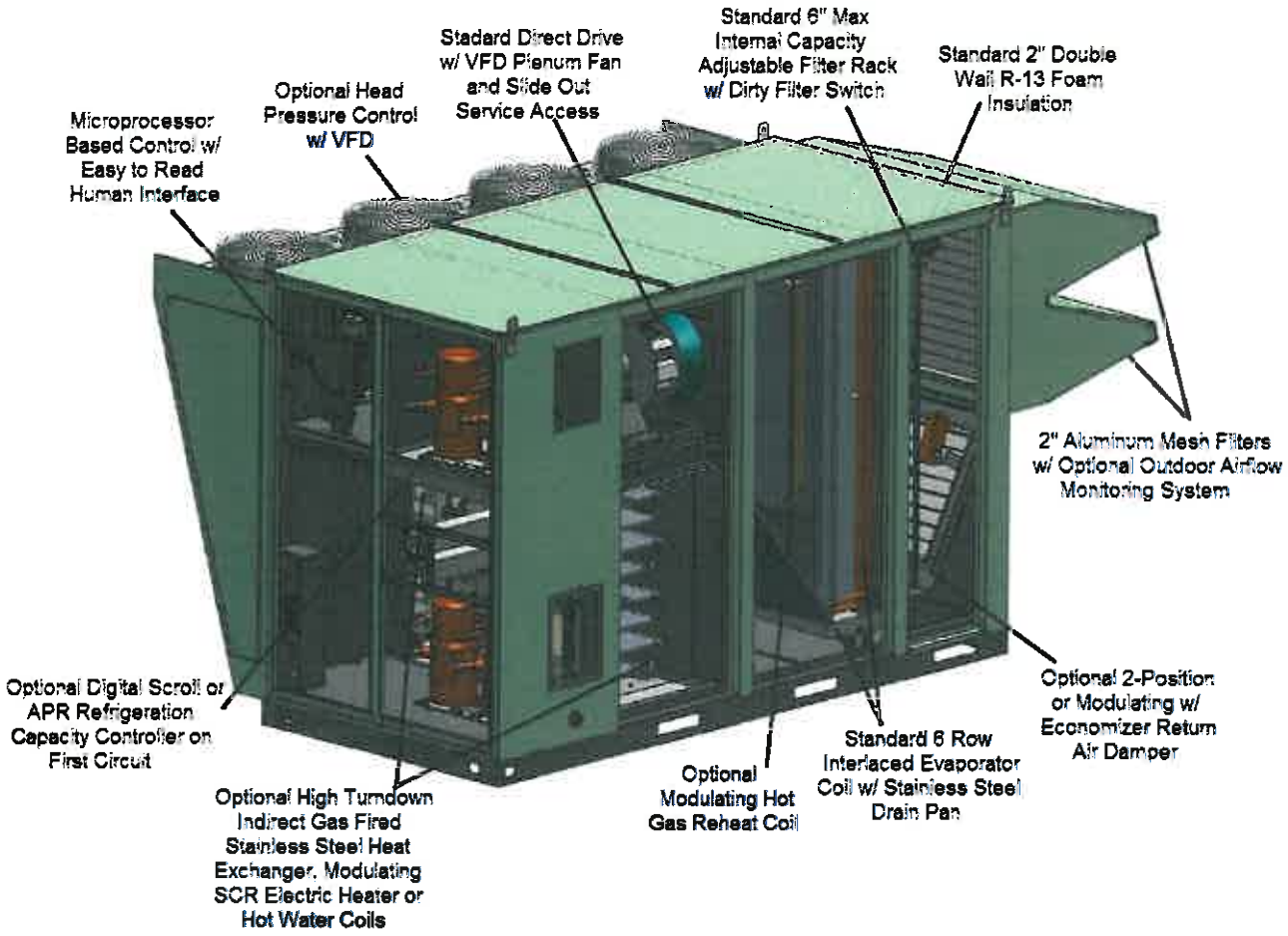
Side View



Bottom View

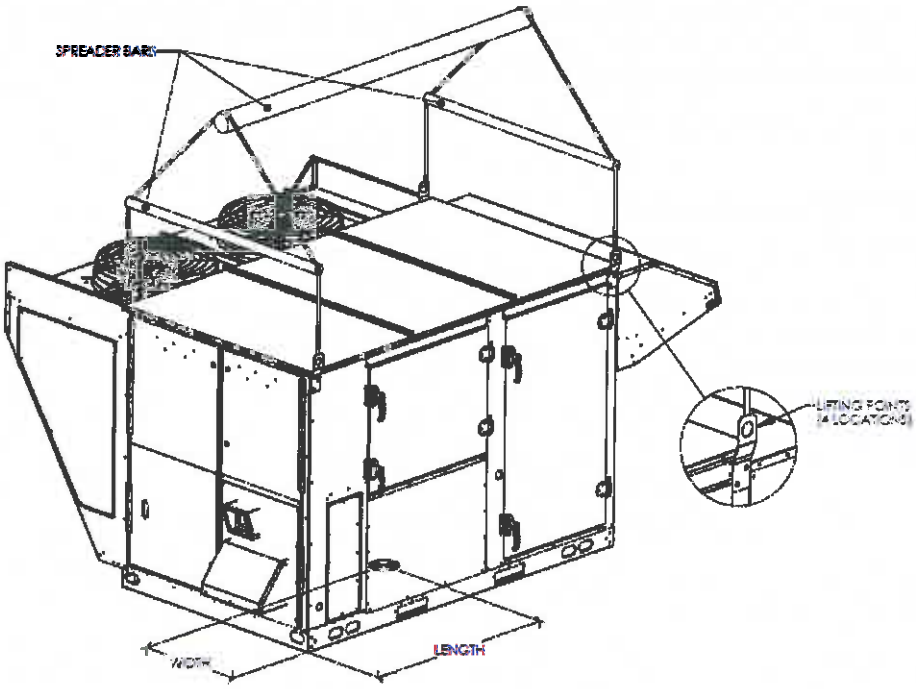
Component Layout - 30-54 Ton R-410A PKGD Unitary Cooling Rooftop

Qty: 1 Tags: MUA-1



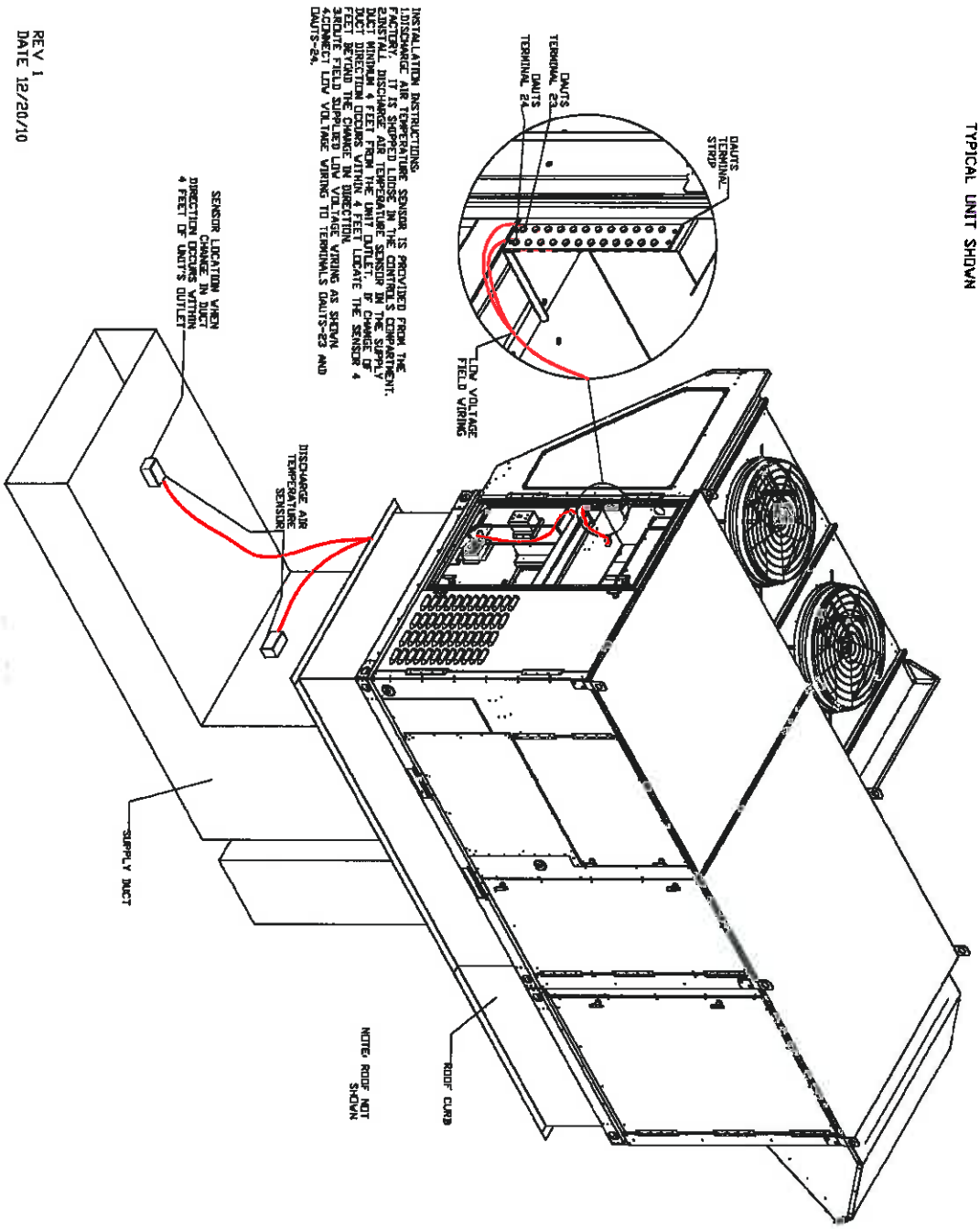
Rigging Diagram - 5-54 Ton R-410A PKGD Unitary Cooling Rooftop

Qty: 1 Tags: MUA-1



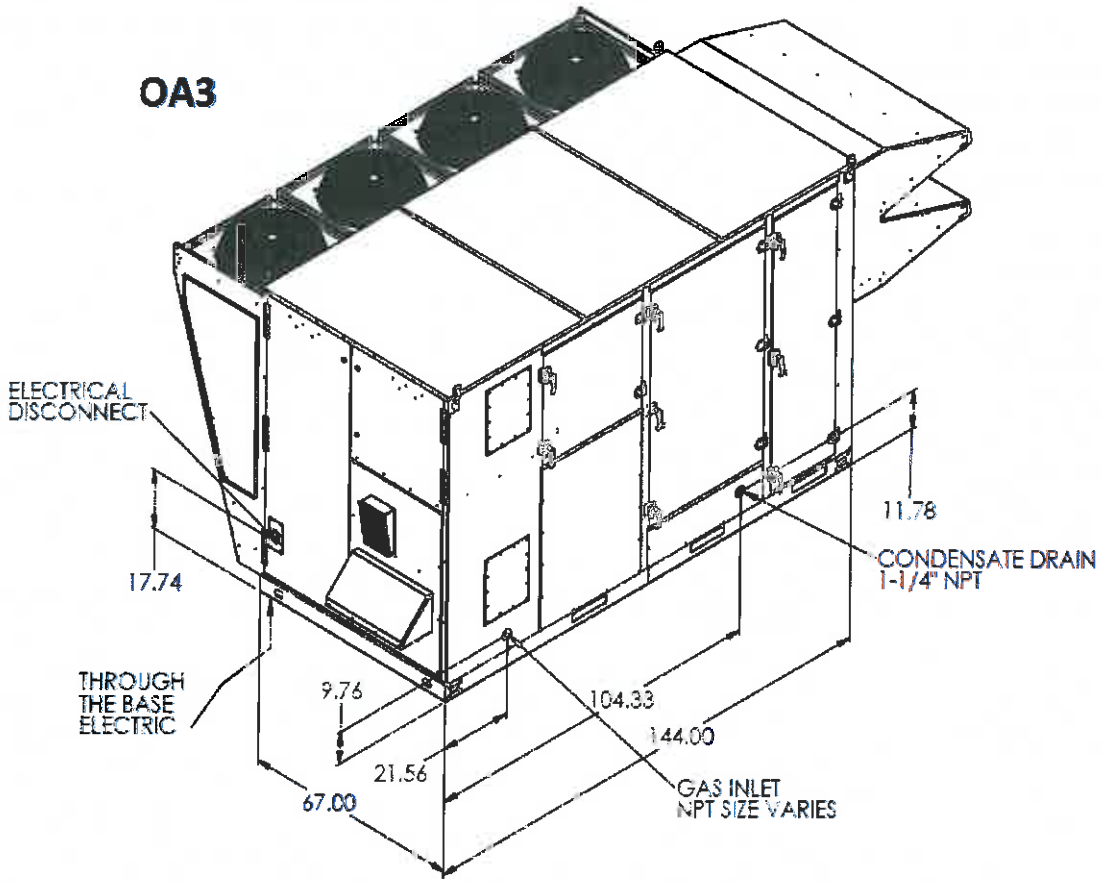
Field Wiring - 3-54 Ton R-410A PKGD Unitary Cooling Rooftop

Qty: 1 Tags: MUA-1



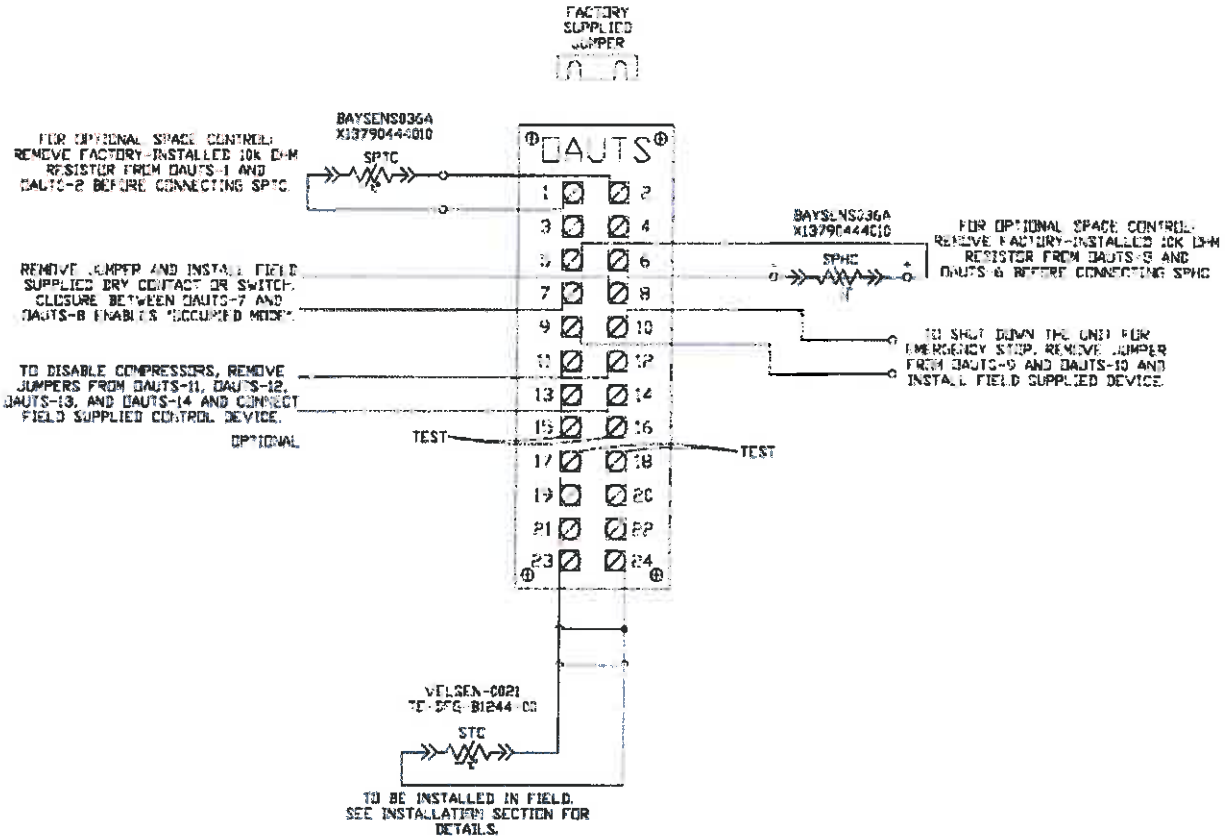
Utility Connections - 30-54 Ton R-410A PKGD Unitary Cooling Rooftop

Qty: 1 Tags: MUA-1



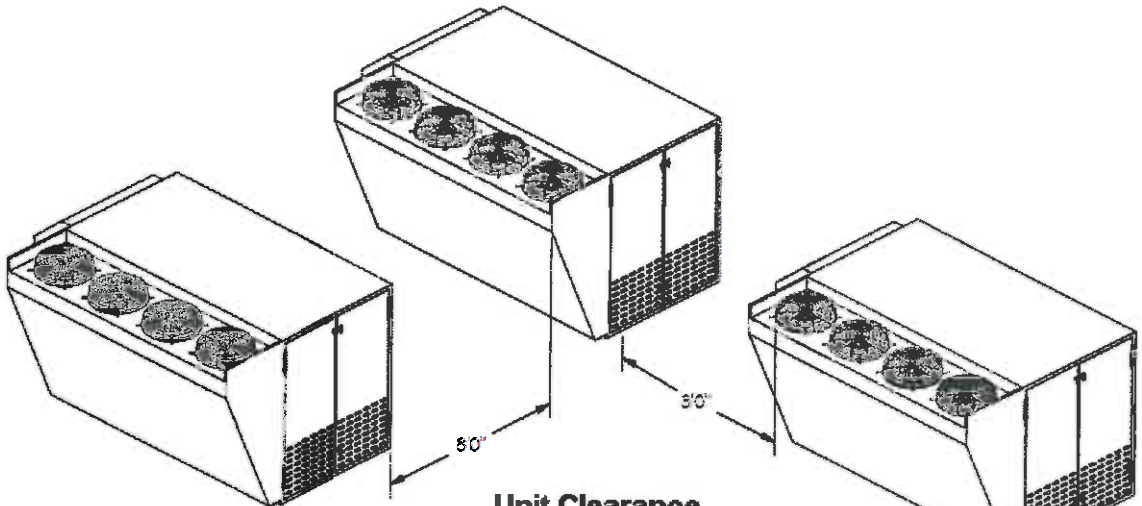
Field Wiring - 3-54 Ton T-410A PKGD Unitary Cooling Rooftop

Qty: 1 Tags: MUA-1

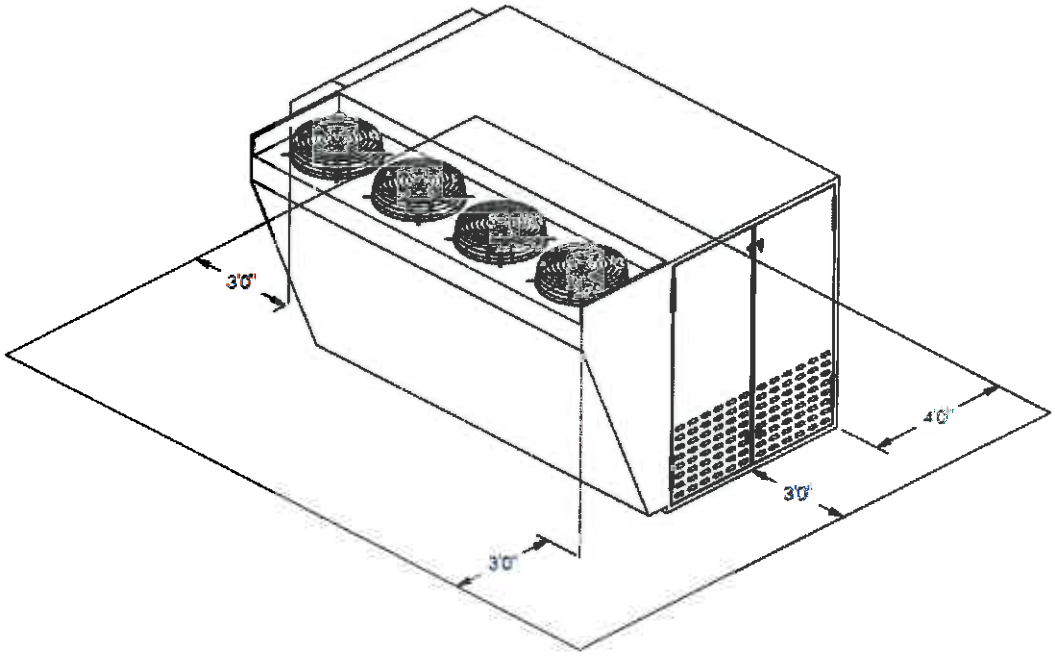


Clearance Diagram - 30-54 Ton R-410A PKGD Unitary Cooling Rooftop

Qty: 1 Tags: MUA-1



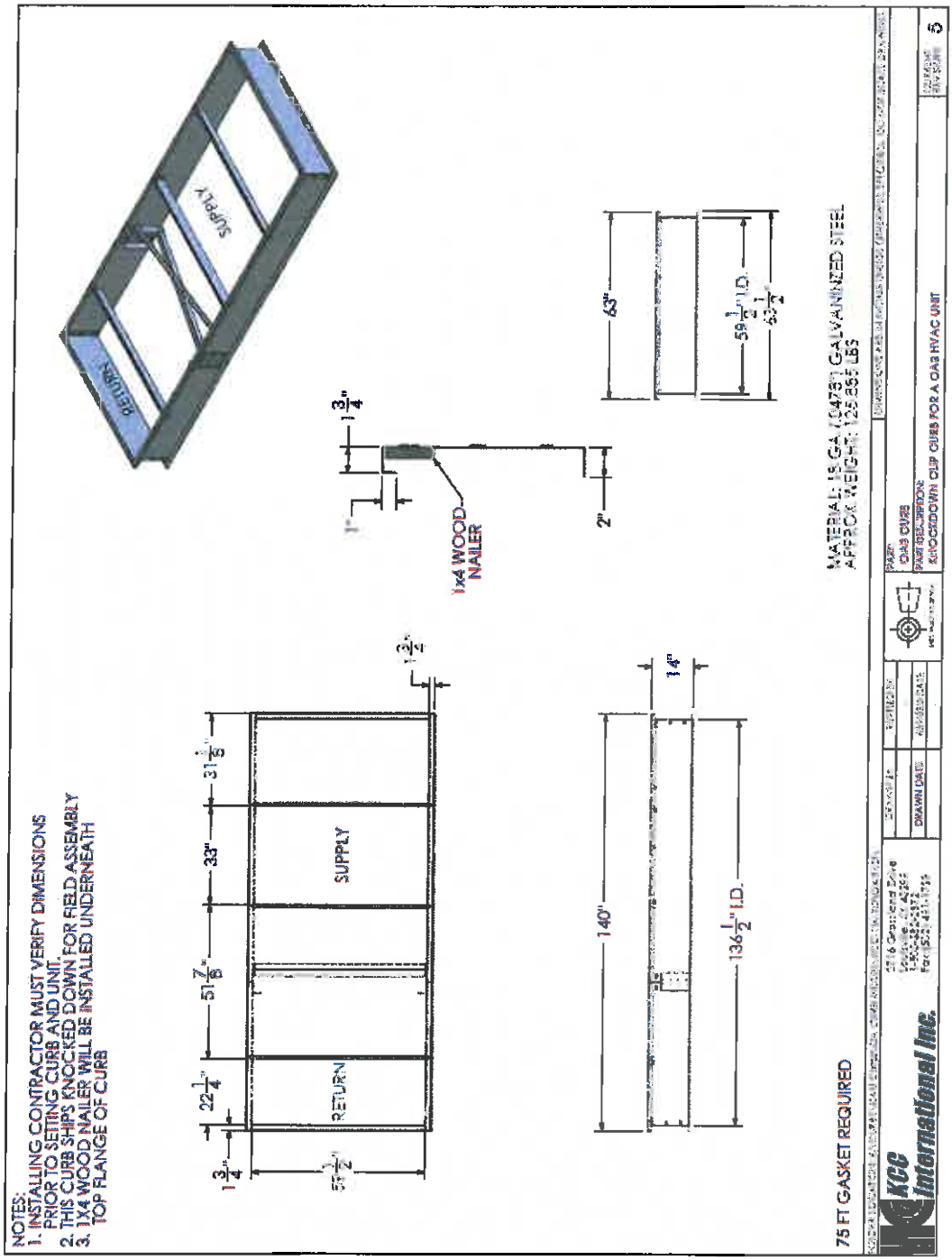
Unit Clearance



Service Clearance

Roof Curb - 30-54 Ton R410A PKGD Unitary Cooling Rooftop

Qty: 1 Tags: MUA-1



Options - 2 Position Damper Actuator

Qty: 1 Tags: MUA-1

LF24(-S) US

On/Off, Spring Return, 24V

BELIMO

Torque min. 35 in-lb, for control of air dampers

Application

For On/Off, fail-safe control of dampers in HVAC systems. Actuator sizing should be done in accordance with the damper manufacturer's specifications. Control is On/Off from an auxiliary contact, digital output, or a manual switch.

The actuator is mounted directly to a damper shaft from 3/8" up to 1/2" in diameter by means of its universal clamp, 1/2" shaft centered at delivery. For shafts up to 3/4" use K6-1 accessory. A crank arm and several mounting brackets are available for applications where the actuator cannot be direct coupled to the damper shaft.

Operation

The LF series actuators provide true spring return operation for reliable fail-safe application and positive close off on air tight dampers. The spring return system provides consistent torque to the damper with, and without, power applied to the actuator.

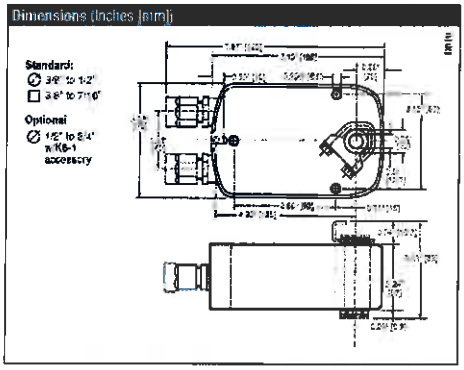
The LF series provides 95° of rotation and is provided with a graduated position indicator showing 0° to 95°.

The actuator may be stalled anywhere in its normal rotation without the need of mechanical end switches. Power consumption is reduced in holding mode.

The LF24-S US version is provided with one built in auxiliary switch. This SPDT switch is provided for safety interfacing or signaling, for example, for fan start-up. The switching function is adjustable between 0° and 95°. The auxiliary switch in the LF24-S is double insulated so an electrical ground connection is not necessary.

Technical Data		LF24(-S) US
Power supply		24 VAC ± 20% 50/60 Hz 24 VDC ± 10%
Power consumption	running	5 W
	holding	2.5 W
Transformer sizing		7 VA (class 2 power source)
Electrical connection (LF24-S US has 2 cables)		3 ft, 18 GA appliance cable 1/2" conduit connector
Overload protection		electronic throughout 0 to 95° rotation
Angle of rotation		max. 95°, adjust. with mechanical stop
Torque		35 in-lb [4 Nm]
Direction of rotation		reversible with cw/ccw mounting
Position indication		visual indicator, 0° to 95° (0° is spring return position)
Running time (nominal)	motor	< 40 to 75 sec
	spring	< 25 sec @-4°F to 122°F [-20°C to 50°C] < 60 sec @-22°F [-30°C]
Humidity		5 to 95% RH non-condensing
Ambient temperature		-22°F to 122°F [-30°C to 50°C]
Storage temperature		-40°F to 176°F [-40°C to 80°C]
Housing		NEMA type 2 / IP54
Housing material		zinc coated steel
Agency listings		cULus acc. to UL 873 and CAN/CSA C22.2 No. 24-93
Noise level (max)	running	< 50 db (A)
	spring return	62 dB (A)
Servicing		maintenance free
Quality standard		ISO 9001
Weight	LF24	3.1 lbs (1.40 kg)
	LF24-S	3.2 lbs (1.45 kg)
LF24-S US		
Auxiliary switch		1 x SPDT 3A (0.5A) @ 250 VAC, UL Approved adjustable 0° to 95° (double insulated)

Dimensions (inches [mm])



M40024 - 05/10 - Subject to change. © Belimo Aircontrols (USA), Inc.

Mechanical Specifications - Tag(s): MUA-1

General

The units shall be down discharge airflow. Cooling performance shall be rated in accordance with ARI testing procedures. All units shall be factory assembled, internally wired, fully charged with R-410A, and 100 percent run tested to check cooling operation, fan and blower rotation, and control sequence before leaving the factory. Wiring internal to the unit shall be colored and numbered for simplified identification. Units shall be ETL listed and labeled, classified in accordance to UL 1995/CAN/CSA No. 236-M40 for Central Cooling Air Conditioners. Canadian units shall be CSA Certified.

Casing

Unit casing shall be constructed of zinc coated, heavy gauge, galvanized steel. Exterior surfaces shall be cleaned, phosphatized, and finished with a weather-resistant baked enamel finish. Unit's surface shall be tested 1000 hours in a salt spray test in compliance with ASTM B45. Unit shall have a 2 inch thick Antimicrobial Insulation. All insulation edges shall be either captured or sealed. The unit's base pan shall have no penetrations within the perimeter of the curb other than the raised downflow supply/return openings to provide an added water integrity precaution, if the condensate drain backs up.

Unit Top

The top cover shall be one piece construction or, where seams exist, it shall be double-hemmed and gasket-sealed. The ribbed top adds extra strength and enhances water removal from unit top

Sensors

A factory installed combination outdoor air sensor located in the outdoor air hood is designed to sense both outdoor air temperature and relative humidity for use by the microprocessor controller to make required ventilation, cooling, dehumidification and heating decisions. Refer to the Sequence of Operations section of the Installation, Operation and Maintenance manual for detailed unit control and operational modes. A factory installed sensing tube is designed to sense the supply air temperature downstream of the indoor fan section.

Indoor Fans

Supply Fan motor shall be direct drive type with factory installed Variable Frequency Drive. All motors shall be thermally protected. All indoor fan motors meet the U.S. Energy Policy Act of 2005 (EPACT).

Evaporator Coil: DX 6 Row Interlaced

Internally finned, 5/16 inch copper tubes mechanically bonded to a configured aluminum plate fin shall be standard. Coils shall be leak tested at the factory to ensure the pressure integrity. The evaporator coil shall be leak tested to 500 psig and pressure tested to 500 psig. A Stainless Steel double-sloped condensate drain pan with provision for through the unit wall condensate drain is standard. Evaporator coil will have 6 interlaced rows for superior sensible and latent cooling.

Hot Gas Reheat: Modulating

This option shall consist of a modulating hot-gas reheat coil located on the leaving air side of the evaporator coil pre-piped and circuited with a low pressure switch. Refer to the Sequence of Operations section of the Installation, Operation and Maintenance manual for detailed unit control and operational modes.

439 Stainless Steel Furnace: 1000 Mbtu/h, (20:1 Turndown NG, 16:1 Turndown LP)

Primary heat is supplied using indirect fired gas heating. The heating section shall have a progressive tubular heat exchanger design using Stainless Steel burners and type 439 Stainless Steel tubes. An induced draft combustion blower shall be used to pull the combustion products through the firing tubes. The heater shall use a direct spark ignition (DS) system. On initial call for heat, the combustion blower shall purge the heat exchanger for 20 seconds before ignition. After three unsuccessful ignition attempts, the entire heating system shall be locked out until manually reset at the thermostat/zone sensor. Units shall be comply with the California requirement for low NOx emissions. Unit shall be suitable for use with Natural Gas.

Filters: MERV-8

Aluminum Mesh Filters (D, K and N Cabinets) and Galvanized Mesh Bird Screen (B and G Cabinets) shall be installed on the intake of the unit. In addition, one row of 2 inch MERV-8 rated filters (30 percent) shall be installed prior to the evaporator coil.

Submittal

Prepared For:

Sold To:

Date: *January 28, 2015*

Customer P.O. Number:
Customer Project Number:

Job Number:
Job Name:
Hino Expansion

Trane U.S. Inc. is pleased to provide the enclosed submittal for your review and approval.

Product Summary

Qty	Product
3	Packaged Gas/Electric Rooftop Units

The attached information describes the equipment we propose to furnish for this project, and is submitted for your approval.

Kenneth Young
Trane
540 Leon Sullivan Way
Charleston, WV 25301-1217
Phone: (304) 346-0549
Cell: (304) 546-6294
Fax: (304) 346-8920

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Field Installed Options - Part/Order Number Summary **15**

Packaged Gas/Electric Rooftop Units 15

Tag Data - Packaged Gas/Electric Rooftop Units (Qty: 3)

Item	Tag(s)	Qty	Description	Model Number
A1	No Tag	3	12 1/2 -25 Ton Packaged Unitary Gas/Elec	YSD300F4RHA--H0C1A106010700000000000000

Product Data - Packaged Gas/Electric Rooftop Units

Item: A1 Qty: 3

Gas/Electric
Standard efficiency
Downflow
25 Ton
Major design sequence
460/60/3
Reliatel
Gas Heat - High
Economizer Comparative Enthalpy 0-100% with Barometric Relief
Hinged panels/2" Pleated Filters Merv 8
Standard condenser coil with hail guard
Through the base electric
Unit mounted non-fused disconnect
BACnet communications interface
Frostat
Clogged filter switch, Fan failure switch and Discharge air sensing tube
Roof curb (Fld)

Mechanical Specifications - Packaged Gas/Electric Rooftop Units
Item: A1 Qty: 3

General
The units shall be dedicated downflow or horizontal airflow. The operating range shall be between 115°F and 0°F in cooling as standard from the factory for all units. Cooling performance shall be rated in accordance with AHRI testing procedures. All units shall be factory assembled, internally wired, fully charged with R-410A, and 100 percent run tested to check cooling operation, fan and blower rotation and control sequence, before leaving the factory. Wiring internal to the unit shall be colored and numbered for simplified identification. Units shall be UL listed and labeled, classified in accordance to UL 1995/C 22.2, 236-05 3rd Edition.

Casing
Unit casing shall be constructed of zinc coated, heavy gauge, galvanized steel. Exterior surfaces shall be cleaned, phosphatized, and finished with a weather-resistant baked enamel finish. Unit's surface shall be tested 672 hours in a salt spray test in compliance with ASTM B117. Cabinet construction shall allow for all maintenance on one side of the unit. In order to ensure a water and air tight seal, service panels shall have lifting handles and no more than three screws to remove. All exposed vertical panels and top covers in the indoor air section shall be insulated with a 1/2 inch, 1 pound density foil-faced, fire-resistant, permanent, odorless, glass fiber material. The base of the downflow unit shall be insulated with 1/2 inch, 1 pound density foil-faced, closed-cell material. The downflow unit's base pan shall have no penetrations within the perimeter of the curb other than the raised 11/8 inch high supply/return openings to provide an added water integrity precaution, if the condensate drain backs up. The base of the unit shall have provisions for forklift and crane lifting.

Unit Top
The top cover shall be one piece, or where seams exist, double hemmed and gasket sealed to prevent water leakage.

Filters
Two inch standard filters shall be factory supplied on all units. Optional two inch pleated media filters shall be available.

Compressors
All units shall have direct-drive, hermetic, scroll type compressors with centrifugal type oil pumps. Motor shall be suction gas-cooled and shall have a voltage utilization range of plus or minus 10 percent of nameplate voltage. Internal overloads shall be provided with the scroll compressors. All models shall have crankcase heaters, phase monitors and low and high pressure control as standard.

Crankcase Heaters
These band heaters provide improved compressor reliability by warming the oil to prevent migration during off-cycles or low ambient conditions. These are standard on all Voyager models.

Refrigerant Circuits
Each refrigerant circuit shall have independent fixed orifice or thermostatic expansion devices, service pressure ports, and refrigerant line filter driers factory installed as standard. An area shall be provided for replacement suction line driers.

Gas Heating Section
The heating section shall have a drum and tube heat exchanger design using corrosion resistant steel components. A forced combustion blower shall supply premixed fuel to a single burner ignited by a pilotless hot surface ignition system. In order to provide reliable operation, a negative pressure gas valve shall be used on standard furnaces and a pressure switch on furnaces with modulating heat that requires blower operation to initiate gas flow. On an initial call for heat, the combustion blower shall purge the heat exchanger 45 seconds before ignition. After three unsuccessful ignition attempts, the entire heating system shall be locked out until manually reset at the thermostat. Units shall be suitable for use with natural gas or propane (field installed kit) and shall also comply with California requirements for low NOx emissions. The 12½- 25 tons shall have two stage heating (Gas/Electric Only).

Microchannel coils
The microchannel type condenser coil is standard for the T/YCD 12.5-25 ton standard efficiency models.

Due to flat streamlined tubes with small ports, and metallurgical tube-tofin bond, microchannel coil has better heat transfer performance. Microchannel condenser coil can reduce system refrigerant charge by up to 50% because of smaller internal volume, which leads to better compressor reliability. Compact all-aluminum microchannel coils also help to reduce the unit weight. All-aluminum construction improves re-cyclability. Galvanic corrosion is also minimized due to all aluminum construction. Strong aluminum brazed structure provides better fin protection. In addition, flat streamlined tubes also make microchannel coils more dust resistant and easier to clean. Coils shall be leak tested at the factory to ensure the pressure integrity. The evaporator coil and condenser coil shall be leak tested to 600 psig. The assembled unit shall be leak tested to 465 psig.

Outdoor Fans
The outdoor fan shall be direct-drive, statically and dynamically balanced, draw-through in the vertical discharge position. The fan motor(s) shall be permanently lubricated and shall have built-in thermal overload protection.

Indoor Fan
Units above shall have belt driven, FC centrifugal fans with adjustable motor sheaves. Units with standard motors shall have an adjustable idler-arm assembly for quick-adjustment of fan belts and motor sheaves. All motors shall be thermally protected. Oversized motors shall be available for high static application. All indoor fan motors meet the U.S. Energy Policy Act of 1992 (EPACT).

Controls
Unit shall be completely factory wired with necessary controls and contactor pressure lugs or terminal block for power wiring. Unit shall provide an external location for mounting a fused disconnect device. ReliaTel controls shall be provided for all 24 volt control functions. The resident control algorithms shall make all heating, cooling, and/or ventilating decisions in response to electronic signals from sensors measuring indoor and outdoor temperatures. The control algorithm maintains accurate temperature control, minimizes drift from set point, and provides better building comfort. A centralized control shall provide anti-short cycle timing and time delay between compressors to provide a higher level of machine protection.

High Pressure Cutout
This option is offered for units that do not have High Pressure cutout as standard.

Discharge Line Thermostat
A bi-metal element discharge line thermostat is installed as a standard option on the discharge line of each system. This standard option provides extra protection to the compressors against high discharge temperatures in case of loss of charge, extremely high ambient and other conditions which could drive the discharge temperature higher. Discharge line thermostat is wired in series with high pressure control. When the discharge temperature rises above the protection limit, the bi-metal disc in the thermostat switches to the off position, opening the 24 VAC circuit. When the temperature on the discharge line cools down, the bi-metal disc closes the contactor circuit, providing power to the compressor. When the thermostat opens the fourth time, the ReliaTel control must be manually reset to resume operation on that stage.

Tool-less Hail Guards
Tool-less, hail protection quality coil guards are available for condenser coil protection.

Through the Base Electrical with Disconnect Switch
Three-pole, molded case, disconnect switch with provisions for through the base electrical connections are available. The disconnect switch will be installed in the unit in a water tight RT-PRC028-EN 121 enclosure with access through a swinging door. Factory wiring will be provided from the switch to the unit high voltage terminal block. The switch will be UL/CSA agency recognized.

Note: The disconnect switch will be sized per NEC and UL guidelines but will not be used in place of unit overcurrent protection.

Hinged Access Doors
Sheet metal hinges are available on the Filter/Evaporator Access Door and the Compressor/Control Access Door. This

option is available on all downflow models.

Two-Inch Pleated Filters
Two inch pleated media filters shall be available on all models.

BACnet Communications
The BACnet communications interface allows the unit to communicate directly with a generic open protocol BACnet MS/TP Network Building Automation System Controls.

Defrost Controls
Adaptive demand defrost shall be provided to permit defrost wherever coil icing conditions begin to significantly reduce unit capacity.

Reference or Comparative Enthalpy
Reference Enthalpy is used to measure and communicate outdoor humidity. The unit receives and uses this information to provide improved comfort cooling while using the economizer. Comparative Enthalpy measures and communicates humidity for both outdoor and return air conditions, and return air temperature. The unit receives and uses this information to maximize use of economizer cooling, and to provide maximum occupant comfort control. Reference or Comparative Enthalpy option shall be available when a factory or field installed Downflow Economizer is ordered. This option is available on all downflow models.

Differential Pressure Switches
These options allow for individual fan failure and dirty filter indication. The fan failure switch will disable all unit functions and "flash" the Service LED on the zone sensor. The dirty filter switch will light the Service LED on the zone sensor and will allow continued unit operation.

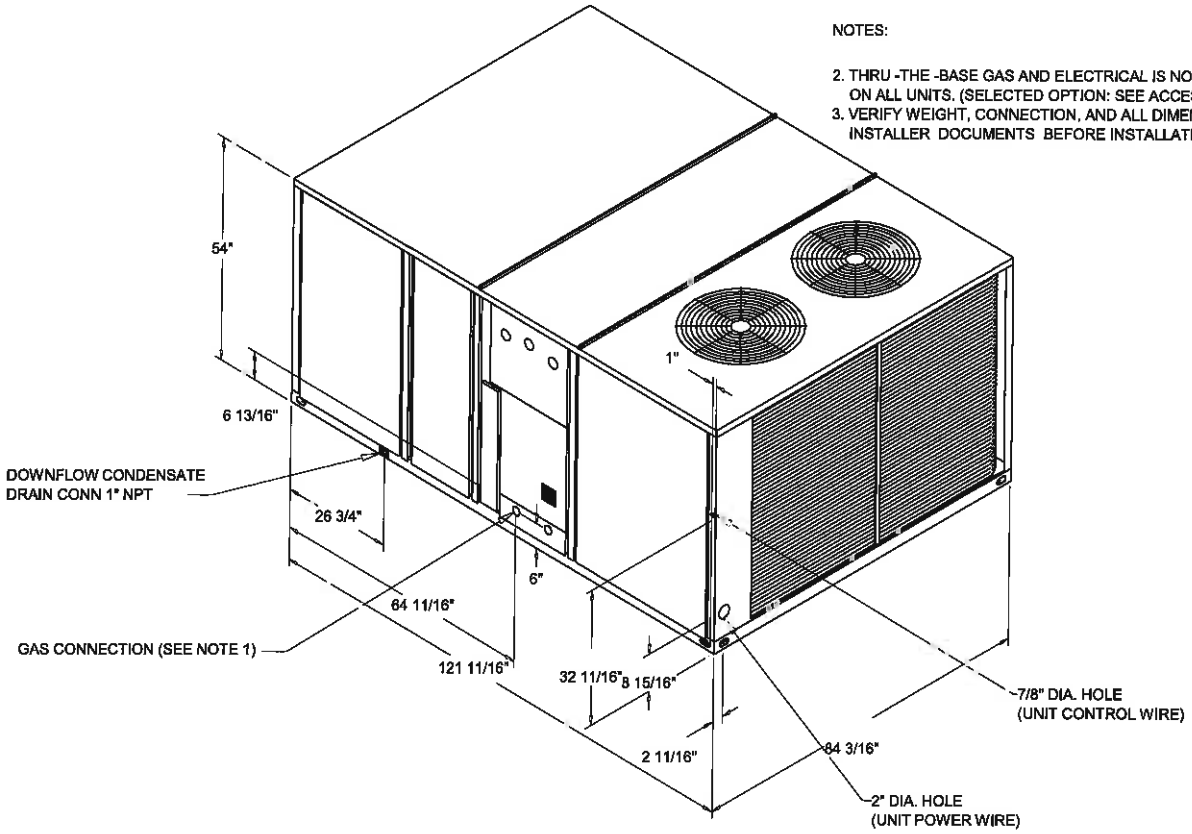
Clogged Filter/Fan Failure Switch
A dedicated differential pressure switch is available to achieve active fan failure indication and/or clogged filter indication. These indications will be registered with either a zone sensor with status indication lights or an Integrated Comfort System.

Comparative Enthalpy-Factory Installed
This option will be factory installed to measure and communicate humidity for both outdoor and return air conditions, and return air temperature. The unit will receive and use this information to maximize use of economizer cooling, and to provide maximum occupant comfort control.

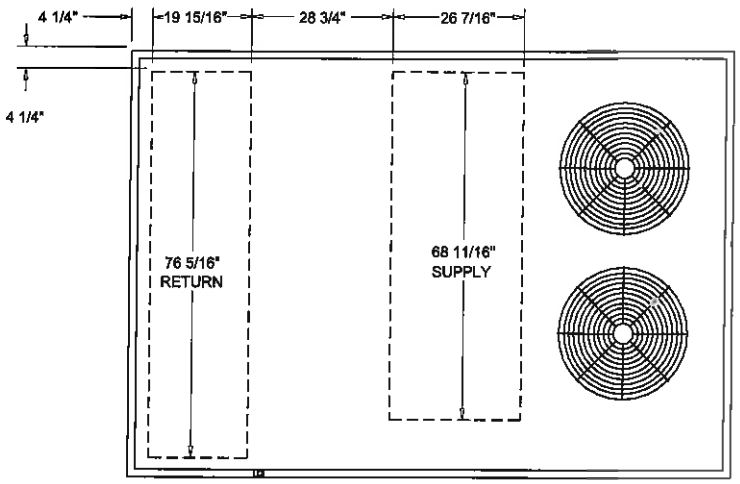
Accessory - Roof Curb - Downflow
The roof curb shall be designed to mate with the downflow unit and provide support and a water tight installation when installed properly. The roof curb design shall allow field-fabricated rectangular supply/return ductwork to be connected directly to the curb. Curb design shall comply with NRCA requirements. Curb shall be shipped knocked down for field assembly and shall include wood nailer strips.

Hinged Access Doors - Ultra High
Sheet metal hinges are available on the Filter/Evaporator Access Door and the Compressor/Control Access Door. This option is available on all downflow models.

Unit Dimensions - Packaged Gas/Electric Rooftop Units
Item: A1 Qty: 3



PACKAGED GAS/ELECTRIC - DOWNFLOW
ISOMETRIC DRAWING



PACKAGED GAS/ELECTRIC - DOWNFLOW
PLAN VIEW DRAWING

Unit Dimensions - Packaged Gas/Electric Rooftop Units
Item: A1 Qty: 3

ELECTRICAL / GENERAL DATA

GENERAL PERFORMANCE

Model (Ton):	YSD300F (25.0)
Unit Operating Voltage Range:	414-506
Unit Primary Voltage:	460
Unit Secondary Voltage:	-
Unit Hertz:	60
Unit Phase:	3
EER:	10.0

Standard Motor

Minimum Circuit Ampacity:	59.0
Maximum Fuse Size:	70.0
Maximum (HACR) Circuit Breaker:	70.0

Oversized Motor

MCA:	N/A
MFS:	N/A
MCB (HACR):	N/A

Field Installed Oversized Motor

MCA:	N/A
MFS:	N/A
MCB (HACR):	N/A

GAS HEATING

Heating Models:	High
Heating and 1 Stage Input (Btu/h)	400,000 / 300,000
Heating and 1 Stage Output (Btu/h):	324,000 / 243,000
Min./Max. Gas Input - Pressure Natural or LP:	2.5 / 14.0
Gas Connection Pipe Size:	3/4"

COMPRESSOR

	Circuit #1 / 2
Number:	2
Horsepower:	10.0
Phase:	3
Rated Load Amps:	18.6
Locked Rotor Amps:	142.0

INDOOR MOTOR

Number:	1
Horsepower:	7.5
Motor Speed (RPM):	3,470
Phase:	3
Full Load Amps:	11.0
Locked Rotor Amps:	74.0

Oversized Motor

Number:	N/A
Horsepower:	N/A
Motor Speed (RPM):	N/A
Phase:	N/A
Full Load Amps:	N/A
Locked Rotor Amps:	N/A

Field Installed Oversized Motor

Number:	N/A
Hp:	N/A
Motor Speed (RPM):	N/A
Phase:	N/A
FLA:	N/A
LRA:	N/A

OUTDOOR MOTOR

Number:	2
Horsepower:	1.00
Motor speed (RPM):	1,125
Phase:	1
Full Load Amps:	2.5
Locked Rotor Amps:	5.8

POWER EXHAUST

(Field Installed Power Exhaust)

Horsepower:	N/A
Motor Speed (RPM):	N/A
Phase:	N/A
Full Load Amps:	N/A
Locked Rotor Amps:	N/A

COMBUSTION BLOWER MOTOR

(Gas-Fired Heating only)

Horsepower:	0.1
Motor Speed (RPM):	3,500/2,800
Phase:	1
Full Load Amps:	0.8
Locked Rotor Amps:	2.00

FILTER

Type:	Throwaway
Furnished:	Yes
Number:	4 / 4
Recommended Size:	20"x20"x2" / 20"x25"x2"

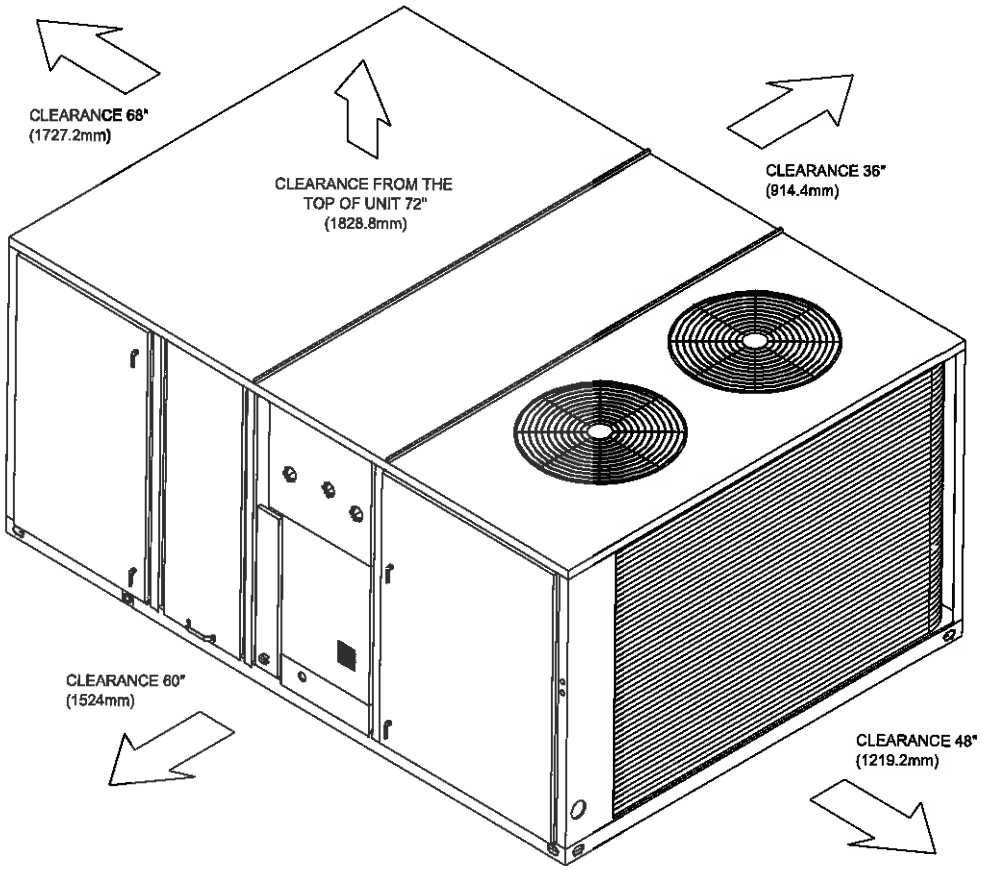
REFRIGERANT

	Circuit #1 / 2
Type:	R410
Factory Charge Circuit #1 / 2:	10.5 lb / 10.5 lb

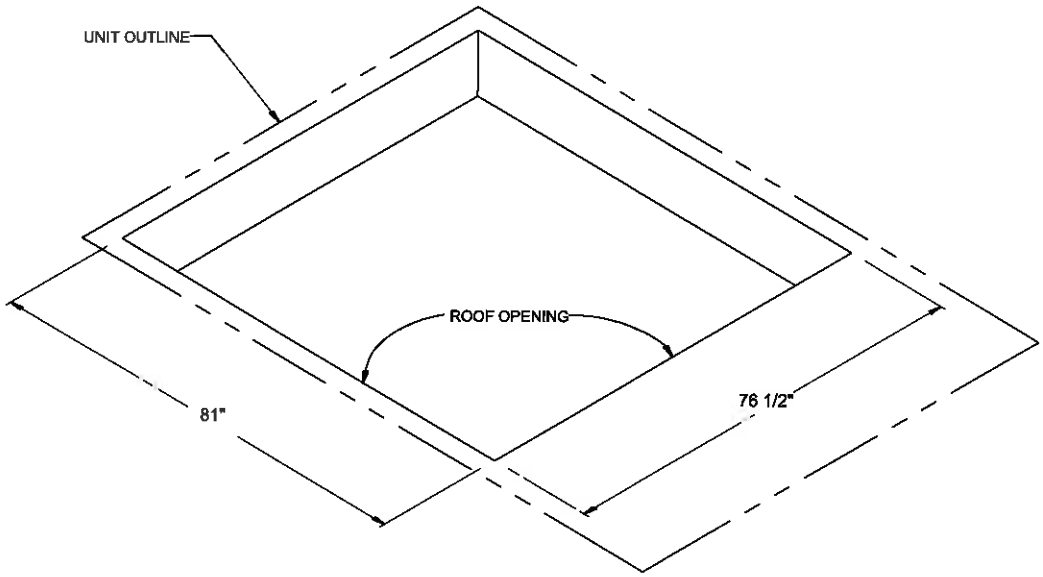
NOTES:

1. Maximum (HACR) Circuit Breaker sizing is for installations in the United States only.
2. Refrigerant charge is an approximate value. For a more precise value, see unit nameplate and service instructions.
3. Value does not include Power Exhaust Accessory.
4. Value includes oversized motor.
5. Value does not include Power Exhaust Accessory.
6. EER is rated at AHRI conditions and in accordance with DOE test procedures.

Weight, Clearance & Rigging Diagram - Packaged Gas/Electric Rooftop Units
Item: A1 Qty: 3

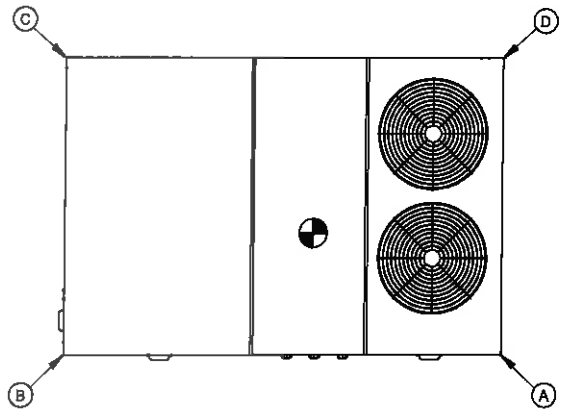


DOWNFLOW-PACKAGED GAS/ELECTRIC CLEARANCE



DOWNFLOW-PACKAGED GAS/ELECTRIC ROOF OPENING CLEARANCE

Weight, Clearance & Rigging Diagram - Packaged Gas/Electric Rooftop Units
Item: A1 Qty: 3



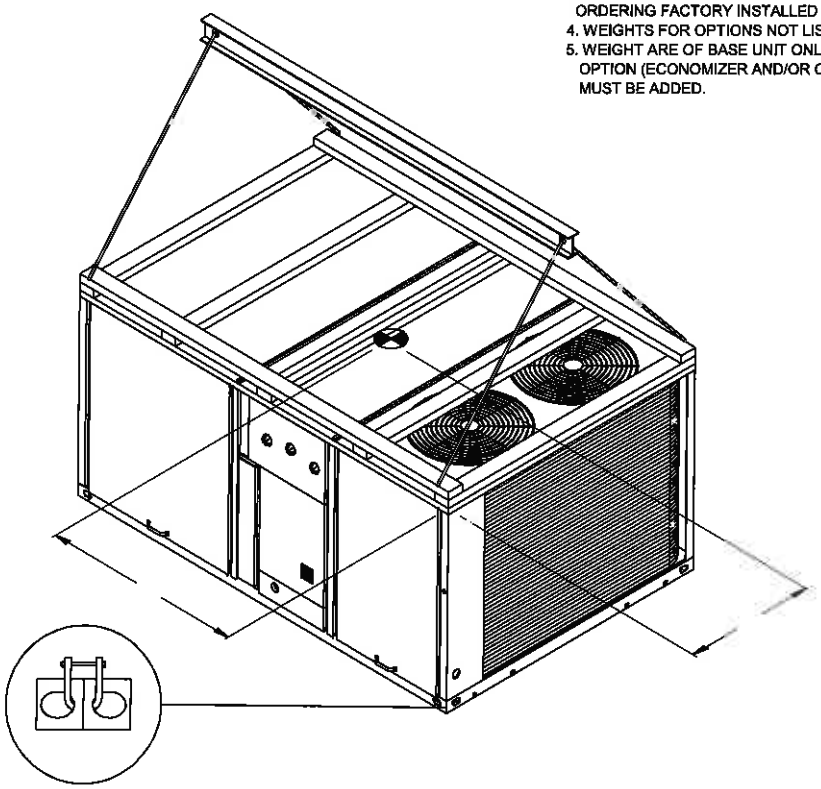
CORNER WEIGHT

INSTALLED OPTIONS NET WEIGHT DATA

Accessory	Accessory
Economizer	80.0 lb
Motorized Outside Air Damper	
Manual Outside air Damper	
Oversized Motor	
High Static Drive	
Thru the Base Electrical	23.0 lb
Unit Mounted Circuit Breaker	
Unit Mounted Disconnect	10.0 lb
Power Exhaust	
Hinged Doors	27.0 lb
Zone Sensor	
LPG Conversion Kit	
Powered Convenience Outlet	
Roof Curb	235.0 lb

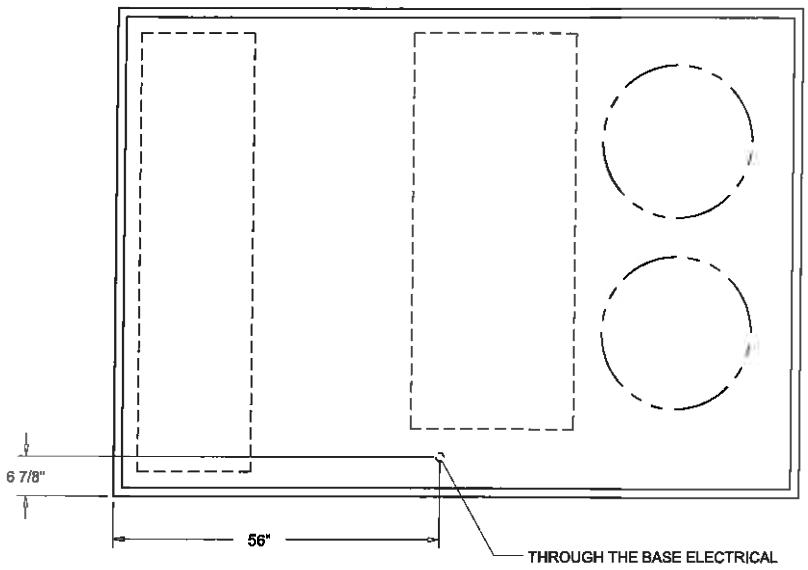
BASE UNIT WEIGHTS		CORNER WEIGHTS				CENTER OF GRAVITY	
SHIPPING	NET	(A)	(B)	(C)	(D)	E	F
i2513.0 lb	2054.0 lb	655.0 lb	555.0 lb	403.0 lb	442.0 lb	60"	35"

NOTE:
1. CORNER WEIGHTS ARE GIVEN FOR INFORMATION ONLY.
2. TO ESTIMATE SHIPPING WEIGHT OF OPTION/ACCESSORIES ADD 5 LBS TO NET WEIGHT.
3. NET WEIGHT OF OPTIONAL ACCESSORIES SHOULD BE ADD TO UNIT WEIGHT WHEN ORDERING FACTORY INSTALLED ACCESSORIES.
4. WEIGHTS FOR OPTIONS NOT LISTED ARE < 5 LBS.
5. WEIGHT ARE OF BASE UNIT ONLY. FOR TOTAL WEIGHT, 10 DIGIT FACTORY INSTALLED OPTION (ECONOMIZER AND/OR OVERSIZED MOTOR OR FIOP/ACCESSORY WEIGHT MUST BE ADDED.



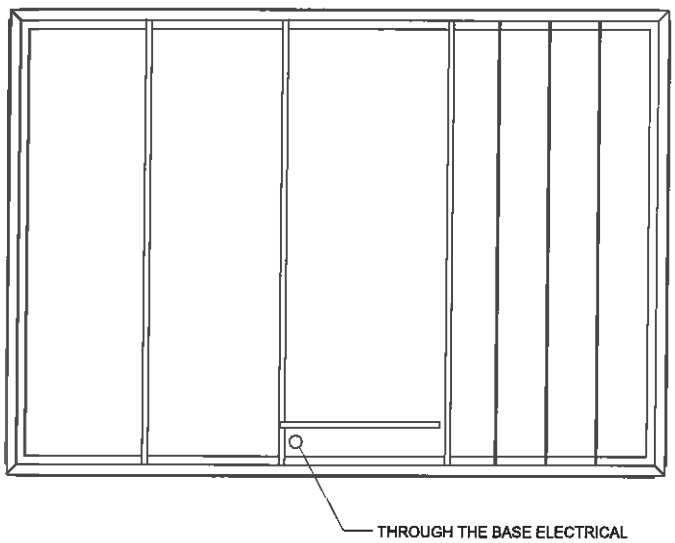
RIGGING AND CENTER OF GRAVITY

Weight, Clearance & Rigging Diagram - Packaged Gas/Electric Rooftop Units
Item: A1 Qty: 3



THROUGH THE BASE ELECTRICAL

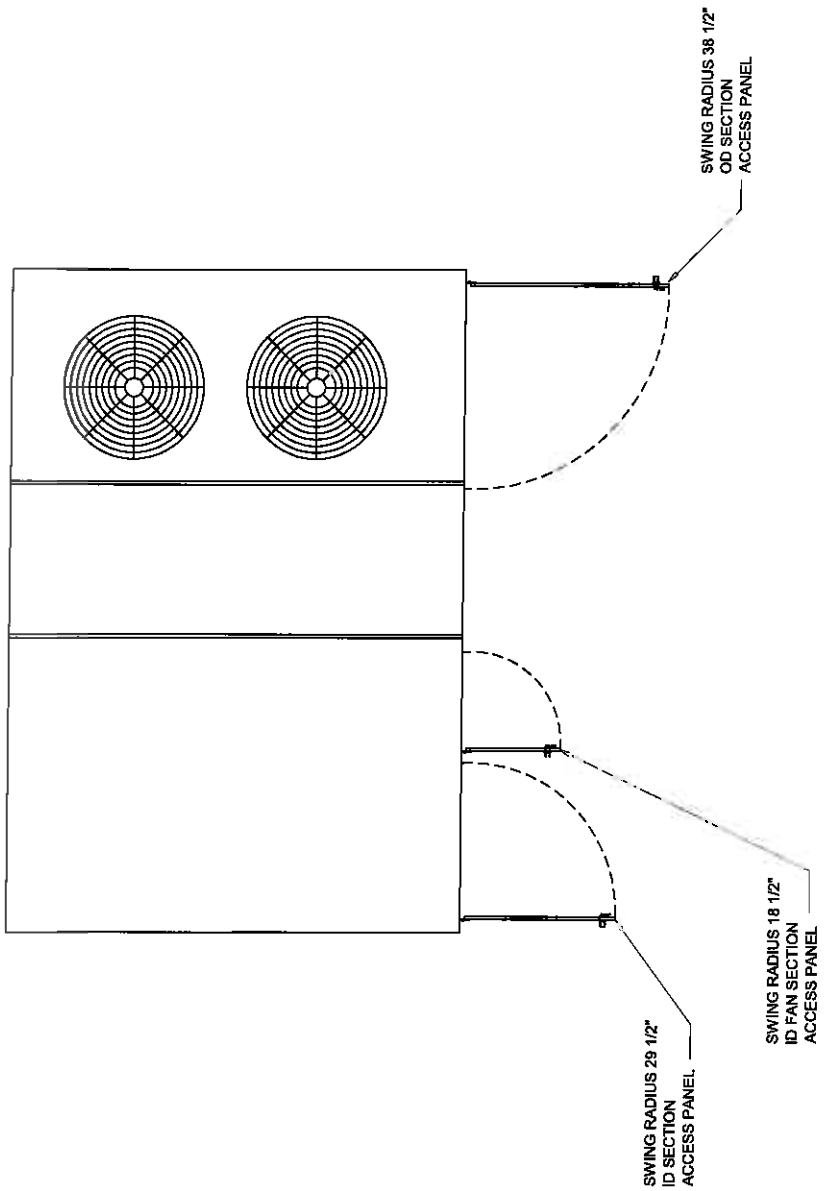
ACCESSORY-PLAN VIEW



THROUGH THE BASE ELECTRICAL ROOF CURB

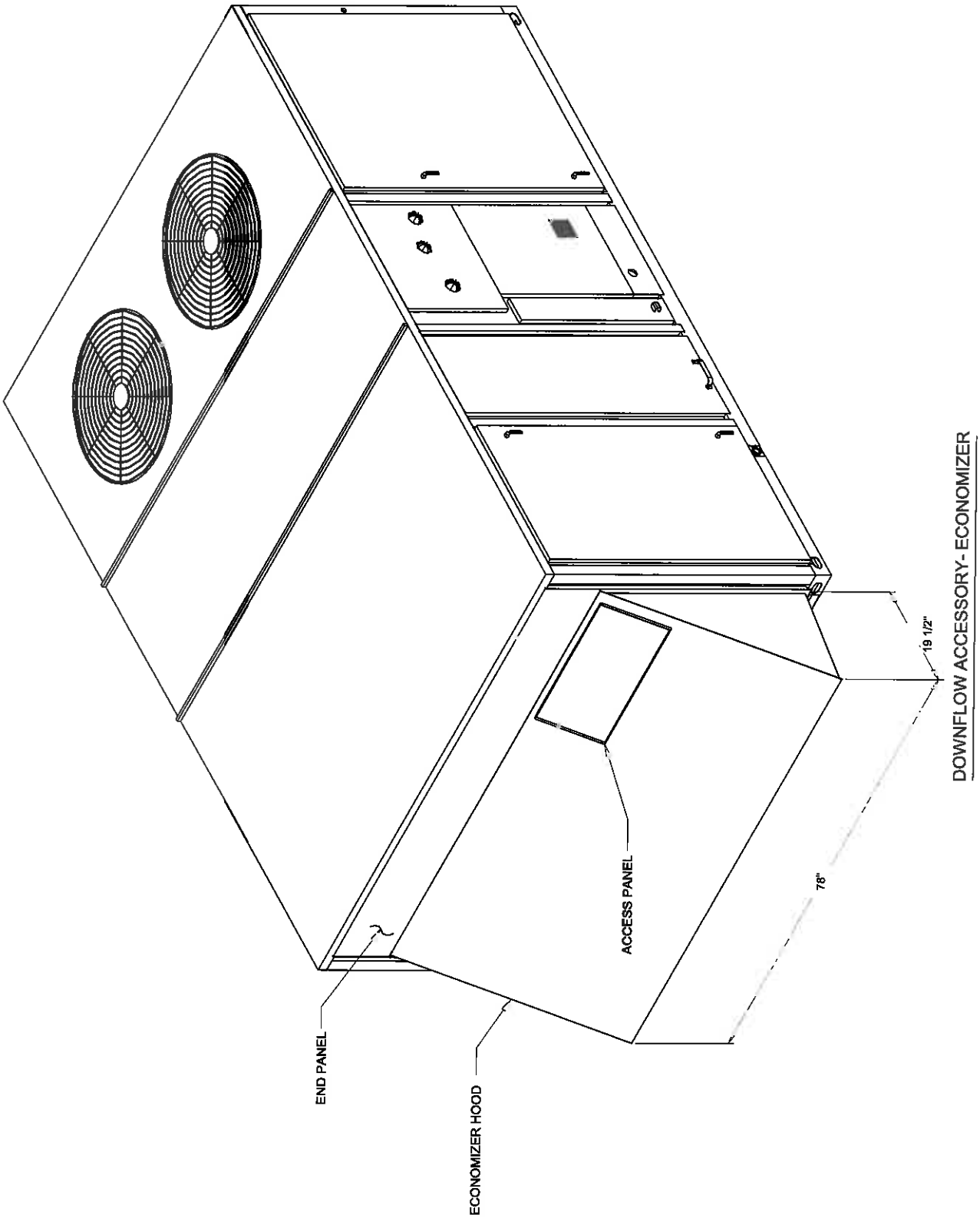
ACCESSORY-PLAN VIEW

Accessory - Packaged Gas/Electric Rooftop Units
Item: A1 Qty: 3

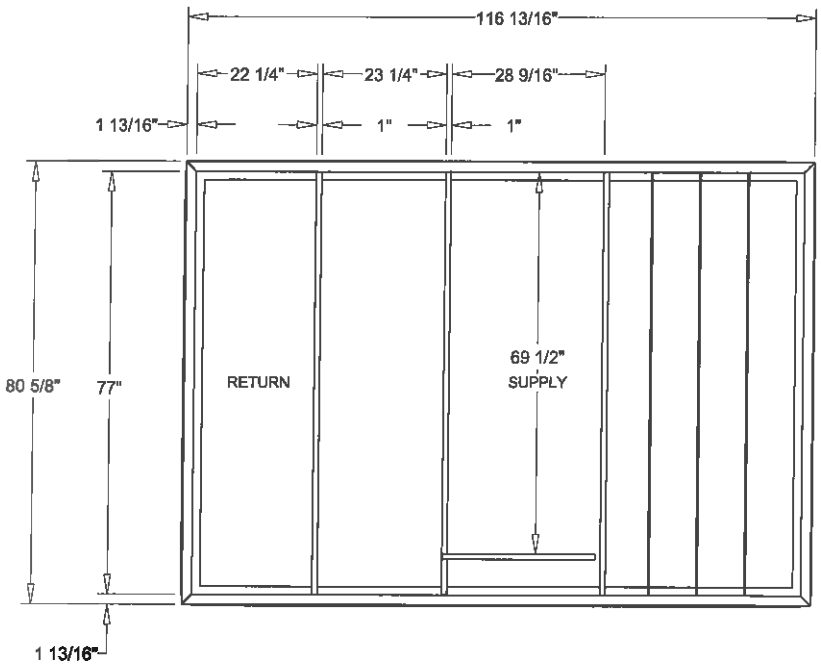


ACCESSORY-HINGGING ACCESS DOORS

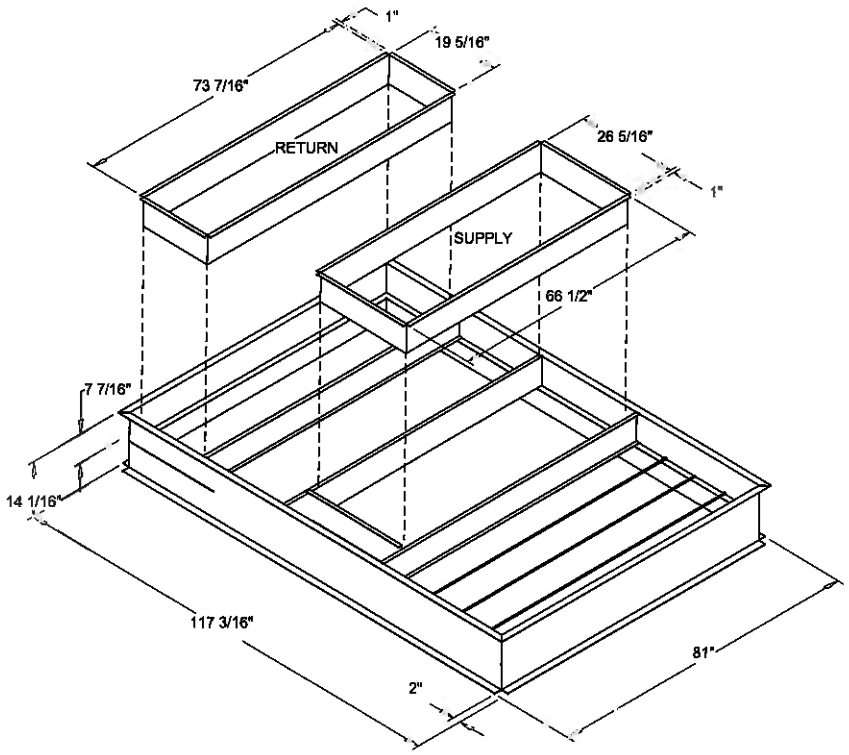
Accessory - Packaged Gas/Electric Rooftop Units
Item: A1 Qty: 3



Accessory - Packaged Gas/Electric Rooftop Units
Item: A1 Qty: 3



ACCESSORY-ROOF CURB



ACCESSORY-DOWNFLOW DUCT CONNECTIONS

Field Installed Options - Part/Order Number Summary
This is a report to help you locate field installed options that arrive at the jobsite. This report provides part or order numbers for each field installed option, and references it to a specific product tag. It is NOT intended as a bill of material for the job.

Product Family - Packaged Gas/Electric Rooftop Units

Item	Tag(s)	Qty	Description	Model Number
A1	No Tag	3	12 1/2 -25 Ton Packaged Unitary Gas/Elec	YSD300F4RHA--H 0C1A1060107000 000000000000

Field Installed Option Description	Part/Ordering Number
Roof curb	BAYCURB027B