

Site Permit Determination Application

S.P.M. Flow Control, Inc
52 Norwins Drive
Buckhannon, West Virginia 26201

August 5, 2016



Oil & Gas
601 Weir Way
Fort Worth, TX 76108
USA

T 817-246-2461
F 817-246-6324
weir.co.uk

August 5, 2016

William T. Rothwell II, PE
West Virginia Department of Environmental Protection
Division of Air Quality
601 57th Street, SE
Charleston, West Virginia 25304

P: 304 926 0475
F: 304 926 0479

Re: Request for Site Permit Determination
S.P.M. Flow Control, Inc
52 Norwins Dr
Buckhannon, West Virginia 26201
Determination No. PD16-006
Plant ID No. 097-00069

Dear Mr. Rothwell,

In response to your letter dated March 29, 2016 related to a previously submitted Permit Determination Form (PDF), S.P.M. Flow Control, Inc. has prepared the attached updated PDF and revised supporting documentation for the above referenced site. Due to unexpected paint performance concerns the site is going to use a different paint than originally submitted. The site is involved in refurbishing iron parts not limited to swivels, straight joints, sections and pipes.

If you have any questions regarding this package or site operations, please contact me at 817-248-2611.

Sincerely,

Weir SPM
Mike Dickerson
Environmental and Sustainability Engineer

Attachment: See list below

ATTACHMENTS

Attachment A – Facility Location Map

Attachment B – Process Flow Diagram

Attachment C – Process Description

Attachment D – Material Safety Data Sheets

Attachment E – Supporting Calculations

Table 1 – Emission Summary

Table 2 – Speciated Paint Emissions

Table 3 – Fugitive Emissions

Attachment F – Permit Determination Form

Attachment G – Regulatory Review

Attachment H - Equipment Information

Attachment A

Facility Location Map

Date: 07/22/14 N:\Projects\2013\94137584\CA2\94137584 bakfarrar.dwg Layer: aerial Cutset Layer: 0



THIS DRAWING SHOULD NOT BE USED SEPARATELY FROM ORIGINAL REPORT.



Project Mgr	BSS	Project No	94137584
Drawn By	JUD	Scale	AS SHOWN
Checked By	BSS	Date	07/22/14
Approved By	BSS		

Terracon
 Consulting Engineers and Scientists
 (Registration No. F-3272)
 8061 CARPENTER FREEWAY DALLAS, TEXAS 75247
 PH: (214) 636-1110 FAX: (214) 636-7373

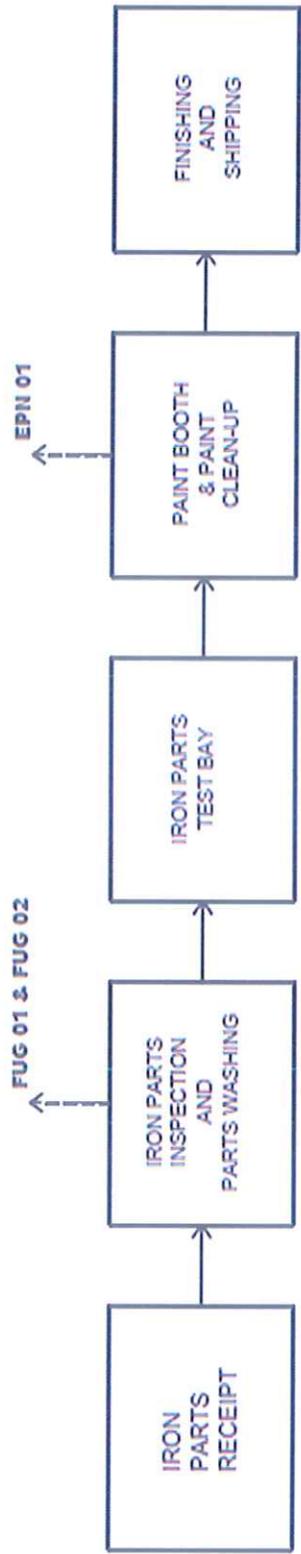
AERIAL MAP

WEIR SPM
 52 NORWINS DRIVE
 BUCKHANNON, WEST VIRGINIA 26201

EXHIBIT
1

Attachment B

Process Flow Diagram



THIS DRAWING SHOULD NOT BE USED SEPARATELY FROM ORIGINAL REPORT.

Project No.	94137584
Scale	NOT TO SCALE
Date	07/22/14
Project Mgr	BSS
Drawn By	ODD
Checked By	BSS
Approved By	BSS

Terracon
 Consulting Engineers and Scientists
 Registration No. 1-5270
 8001 CAMPBELL FREDERICK DALLAS TEXAS 75241
 P.O. BOX 138070 FAX: (214) 634-7070

PROCESS FLOW DIAGRAM
 WEIR SPM
 52 NORWINS DRIVE
 BUCKHANNON, WEST VIRGINIA 26201

Attachment C

Process Description

1.0 Introduction

The site disassembles, inspects, rebuilds, and paints oilfield parts made of iron like swivels, straight joints, sections, and pipes. In general, the process involves, inspection and evaluation of the equipment, disassembly, and then various stages of reconditioning are performed depending on the specific requirements per piece of equipment. Below is a description of various on-site processes:

1.1 Inventory Receipt

The iron parts arrive at the site and are dismantled. Emissions are not anticipated to be generated during the dismantling process.

1.2 Iron Parts Inspection and Parts Washing (2E, 3E, & 4E)

Iron parts are disassembled and visually inspected. The equipment and their components are washed in Inland Technologies IT-80 parts washers (2S, 3S, & 4S) using the Skysol solvent in a recirculating solid stream to remove dirt and grease. Fugitive Volatile Organic Compounds (VOCs) emissions are anticipated from the parts washers, but no emissions are expected to be generated during the inspection process.

1.3 Magnetic Particle Inspection

After the visual inspection and cleaning, iron parts are inspected using a magnetic particle inspection machine to check for material defects. Then the parts are sent for pressure testing. No emissions are expected to be generated during this inspection.

1.4 Pressure Testing

Iron parts are pressure tested using water. Iron parts meeting the specifications are sent for painting. Emissions are not anticipated to be generated during pressure testing.

1.5 Paint Booth and Paint Gun Cleanup (1E)

The site has an open front industrial paint booth with working dimensions of 14' in width by 15' in depth by 8'. The paint booth (1S) will operate with an exhaust rate of 10,700 cubic feet per minute (CFM).

Coatings are applied with one high volume low pressure (HVLP) spray gun with an individual delivery rate of .22 gallon per hour. For calculating emissions from the paint booth, the spray rate of the gun is considered to be 1.0 gallons per hour to account for spray rate variability to material viscosity and air pressure. The paint booth is equipped with a filter capable of reducing particulate matter emissions by 98.21%. The painting operations are followed by curing where residual VOCs will be emitted. VOC emission calculations assume that the VOC in the coatings are completely emitted to account for emissions from coating and curing operations within the paint booth.

The facility utilizes one painter per shift. The painter prepares iron parts on a mobile rack for painting and then loads the rack into the paint booth to begin painting operations. After coating is applied as per specifications, the rack with the iron parts is allowed to dry before unloading the rack out of the paint booth to prepare the iron parts for the next stage. It is estimated that it will take approximately 25 minutes to paint the iron parts and allow them to dry. The rest

of the time in an hour will be spent in preparation, loading, and unloading operations. Due to the physical constraints discussed above, the maximum paint time cannot exceed approximately 3,650 hours per year and will be used to determine the maximum potential to emit. Based on the proposed operating schedule (paint booth available for 16 1/2 hours per day, 5 days per week for 52 weeks) and the above discussed physical limitations, the anticipated hours of painting will be approximately 1788 hours per year. The paint gun is periodically cleaned using Inland Technologies IT-200 automated gun cleaner (5S) within the paint booth. The solvent used will be EP-921. Fugitive VOCs are expected to be generated from the gun cleaning and will be emitted through the paint booth stack (1E). MSDS of the coatings, solvents, and manufacturer's specifications for the paint booth, HVLP spray guns, and filter have been included in Appendix D & H of this application. Facility drawings are attached in Appendix A.

1.6 Reassembly, Inspection, and Shipping

Following painting, the parts and pumps are reassembled, a final inspection is performed and the iron or pump is ready for customer pick-up. Emissions are not expected to be generated during this process.

Attachment D

Material Safety Data Sheets



HPC/Industrial Maintenance

Pitt-Tech Plus Int./Ext. High Gloss DTM Industrial Enamel

GENERAL DESCRIPTION

Pitt-Tech Plus High Gloss Industrial Enamels are a full line of 100% Acrylic waterborne enamels designed for direct-to-metal application. These products provide corrosion protection, chemical and solvent resistance, and are fast drying with low odor. Recommended for use on properly prepared interior or exterior metal, masonry, plaster, wood, and drywall surfaces. **For Professional Use Only; Not Intended for Household Use.**

RECOMMENDED USES

Aluminum	Concrete, Stucco, Plaster, Masonry
Drywall	CMU
Ferrous Metal	Galvanized Steel Wood

FEATURES AND BENEFITS

Excellent adhesion for true DTM performance
 Improved color, and gloss retention versus most alkyds, water-base and two-component systems.
 High hiding
 Flash rust resistant
 Easy to apply, low odor
 Performance Offset to Federal Standard TT-E-2784 and MIL-P-28578
 Meets MPI® Category #154, Light Industrial Coating Interior W.B. Gloss
 Meets MPI Category #164, Light Industrial Coating, Interior W.B. Coating, Gloss, MPI Gloss Level 6
 Can help earn LEED® 2009 credits

MIXING AND APPLICATIONS INFORMATION

Mix thoroughly before and during use.

Permissible temperatures during application:

Material:	50° to 90° F	10°C to 32°C
Ambient:	40° to 100° F	4°C to 38°C
Substrate:	40° to 120° F	4°C to 49°C

Application Equipment: Changes in application equipment, pressures and/or tip sizes may be required depending on ambient temperatures and application conditions.

Brush: High Quality Polyester/Nylon Brush

Roller: 3/8" nap roller cover

Airless Spray: Pressure 1800 - 3150 psi, tip 0.013" to 0.019" Graco Ultra Max Series pumps with contractor guns or equivalent.

Conventional Spray: Fluid Nozzle: DeVilbiss 510 gun, with 704 or 777 air cap with E tip and needle, or comparable equipment. Atomization Pressure: 55-70
Fluid Pressure: Can not specify, dependent on numerous factors.

Thinning: May be reduced up to 5% by volume with water for spray application. Thinning is not usually required for brush and roll. Excessive thinning or insufficient film thickness may cause rust staining. If rust staining occurs, apply an additional coat. Do not add oils, paint thinners, or any paint additives.

TINTING AND BASE INFORMATION

Refer to the color formula book for tinting instructions. Can be tinted with both 896 and 96 line colorants.

90-1310	White & Pastel Base	90-1306	Safety Red
90-1320	Midtone Base*	90-1313	Safety Orange
90-1330	Deeptone Base*	90-1333	Safety Yellow
90-1340	Deep Rustic Base*	90-1353	Gloss Black

*Must be tinted before use.

PRODUCT DATA

PRODUCT TYPE: 100% Acrylic Formula
GLOSS: 80° Minimum (Gloss 60° Meter)
VOC*: 90 g/L (0.75 lbs./gal.)
COVERAGE: 164 to 327 sq. ft./gal.
 (15 to 30 sq. m/3.78L)
 Note: Does not include loss due to varying application method, surface porosity, or mixing.
DFT: 2.0 to 4.0 mils
WEIGHT/GALLON*: 10.04 lbs.(4.55 kg)+/-0.2 lbs. (91g)
VOLUME SOLIDS*: 40.8% +/- 2%
WEIGHT SOLIDS*: 51.0% +/- 2%
MIXED RATIO: One Component

*Product data calculated on 90-1310.

Wet Film Thickness: 5 to 9 mils
Wet Microns: 127 to 229
Dry Film Thickness: 2.0 to 4.0 mils
Dry Microns: 50.8 to 101.6
IN SERVICE TEMP.: Dry Heat 250°F (121°C)
DRYING TIME: Dry time @ 77°F (25°C); 50% relative humidity.
To Touch: 15 minutes
To Handle: 30 minutes
To Recoat: 1 hour

Drying times listed may vary depending on temperature, humidity, color and air movement.

CLEANUP: Soap and Water

FLASH POINT: Over 200°F (93°C)

PACKAGING

1-Gallon (3.78L)
5-Gallon (18.9L)

GENERAL SURFACE PREPARATION

The surface to be coated must be dimensionally stable, dry, clean, and free of oil, grease, release agents, curing compounds, and other foreign materials. The service life of the coating is directly related to the surface preparation. Where appropriate bare areas should be primed with a suitable primer. For best performance for colors using midtone, deeptone or rustic bases over bare metal substrates, the use of a primer or two coats of the topcoat is recommended. *Pitt-Tech Plus* is recommended as a 2-coat system over ferrous metal in C1-C2 environments. Remove and inhibit regrowth of mildew on exterior surfaces by using PPG Mildew Check® Multi-Purpose Wash, 18-1. Before use, be sure to read and follow the instructions and warnings on the label. **WARNING!** If you scrape, sand, or remove old paint, you may release lead dust or fumes. **LEAD IS TOXIC. EXPOSURE TO LEAD DUST OR FUMES CAN CAUSE SERIOUS ILLNESS, SUCH AS BRAIN DAMAGE, ESPECIALLY IN CHILDREN. PREGNANT WOMEN SHOULD ALSO AVOID EXPOSURE.** Wear a properly fitted NIOSH-approved respirator and prevent skin contact to control lead exposure. Clean up carefully with a HEPA vacuum and a wet mop. Before you start, find out how to protect yourself and your family by contacting the USEPA National Lead Information Hotline at 1-800-424-LEAD or log on to www.epa.gov/lead. In Canada contact a regional Health Canada office. Follow these instructions to control exposure to other hazardous substances that may be released during surface preparation.

PREVIOUSLY PAINTED SURFACES: Old coatings should be tested for adhesion of the existing system.

FERROUS METAL: Rust and other surface contaminants must be removed as per SSPC-SP2 Hand Tool or SSPC-SP3 Power Tool. Then the surface thoroughly cleaned to remove all other contaminants as per SSPC-SP1.

GALVANIZED STEEL: Solvent Clean per SSPC-SP1 to remove grease and oils. If any oxidation (white rust) has formed, sand and remove all forms of contamination. If the galvanized has been passivated or stabilized, the surface must be abraded i.e. Brush-Off Blast Clean per SSPC-SP7 or chemically treat the surface.

ALUMINUM: Solvent Clean per SSPC-SP1 to remove grease and oils.

CONCRETE, STUCCO, PLASTER, MASONRY other than CMU: Allow all concrete, mortar, plaster, etc. to cure for thirty (30) days under normal drying conditions. Remove all dirt, dust, grime, loose mortar and all other forms of contamination. Concrete which has been treated with curing compounds or hardeners, should be thoroughly abraded.

CONCRETE MASONRY UNITS: Allow the mortar to cure for thirty (30) days under normal drying conditions. Remove all dirt, dust, grime, loose mortar and all other forms of contamination.

WOOD: Unpainted wood or wood in poor condition should be sanded smooth, wiped clean, then primed. Any knots or resinous areas must be primed before painting. Countersink all nails, putty flush with surface, then prime.

RECOMMENDED PRIMERS

Interior Wood	17-921, 17-955
Concrete, Stucco, Plaster, Masonry other than CM Unit	4-603, 4-808
Concrete Masonry Units	6-15, 16-90
Drywall	6-2, 9-900, 17-921, 12-900
Aluminum	6-204, 90-712, 90-912
Exterior Wood	6-609, 17-921
Ferrous Metal	Self priming, 6-208, 7-852, 90-712, 90-912
Galvanized Steel	Self priming, 6-209, 90-712, 90-912

For more aggressive conditions, use 97-145 series, 97-946 series or 98-46 series primers.

Tannin bleeding woods may require a specialty primer.

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PPG Industries, Inc.
Architectural Coatings
One PPG Place
Pittsburgh, PA 15272
www.ppgipc.com

Technical Services
1-800-441-9695
1-888-807-5123 fax

Architect/Specifier
1-888-PPG-IDEA

PPG Canada, Inc.
Architectural Coatings
4 Kenview Blvd
Brampton, ON L6T 5E4

E8 4/2012
(Supersedes 11/2011)

LIMITATIONS OF USE

For Professional Use Only; Not Intended for Household Use.

Apply only when air, product and surface temperatures are between 40°F - 100°F (4°C - 38°C) and surface temperature is at least 5°F (3°C) above the dew point. Avoid exterior painting late in the day when dew or condensation are likely to form or if rain is threatening. Two coats are required for maximum protection and durability if used as a finish coat. Some colors may require multiple coats for complete hiding. Do not use for immersion service. **PROTECT FROM FREEZING.** Excessive thinning or insufficient film thickness may cause rust staining. If rust staining occurs, apply an additional coat.

SAFETY

Proper safety procedures should be followed at all times while handling this product. **USE WITH ADEQUATE VENTILATION. KEEP OUT OF REACH OF CHILDREN.** Spray equipment must be handled with due care and in accordance with manufacturer's recommendation. High-pressure injection of coatings into the skin by airless equipment may cause serious injury. Read all label and Material Safety Data Sheet for important health/safety information prior to use. MSDS are available through our website www.ppgipc.com or by calling 1-800-441-9695.

Material Safety Data Sheet



Date of issue 8 July 2015

Version 20.01

1. Product and company identification

Product name : PITT-TECH PLUS GLOSS WHITE

Code : 90-1310

Supplier : PPG Industries, Inc.
One PPG Place
Pittsburgh, PA 15272

Emergency telephone number : (412) 434-4515 (U.S.)
(514) 645-1320 (Canada)
01-800-00-21-400 (Mexico)

Technical Phone Number : 888-977-4762

2. Hazards identification

Emergency overview : WARNING!
MAY BE HARMFUL IF INHALED OR SWALLOWED. CONTAINS MATERIAL THAT MAY CAUSE TARGET ORGAN DAMAGE, BASED ON ANIMAL DATA.
Use only with adequate ventilation. Keep container tightly closed and sealed until ready for use. Wash thoroughly after handling.

Potential acute health effects

Inhalation : May be harmful if inhaled.

Ingestion : May be harmful if swallowed.

Skin : No known significant effects or critical hazards.

Eyes : No known significant effects or critical hazards.

Over-exposure signs/symptoms

Inhalation : No specific data.

Ingestion : No specific data.

Skin : No specific data.

Eyes : No specific data.

Medical conditions aggravated by over-exposure : Pre-existing disorders involving any target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product.

This Material Safety Data Sheet has been prepared in accordance with Canada's Workplace Hazardous Materials Information System (WHMIS).

See toxicological information (Section 11)

3. Composition/information on ingredients

<u>Name</u>	<u>CAS number</u>	<u>% (w/w)</u>
Titanium dioxide	13463-67-7	10 - 30

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

4. First aid measures

If ingestion, irritation, any type of overexposure or symptoms of overexposure occur during or persists after use of this product, contact a POISON CONTROL CENTER, EMERGENCY ROOM OR PHYSICIAN immediately; have Material Safety Data Sheet information available. Never give anything by mouth to an unconscious or convulsing person.

- Eye contact** : Remove contact lenses, irrigate copiously with clean, fresh water, holding the eyelids apart for at least 10 minutes and seek immediate medical advice.
- Skin contact** : Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognized skin cleanser. Do NOT use solvents or thinners.
- Inhalation** : Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.
- Ingestion** : If swallowed, seek medical advice immediately and show this container or label. Keep person warm and at rest. Do NOT induce vomiting.
- Notes to physician** : No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

5. Fire-fighting measures

Flammability of the product : In a fire or if heated, a pressure increase will occur and the container may burst.

Extinguishing media

- Suitable** : Use an extinguishing agent suitable for the surrounding fire.
- Not suitable** : None known.
- Special exposure hazards** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
- Hazardous combustion products** : Decomposition products may include the following materials:
carbon oxides
metal oxide/oxides
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6. Accidental release measures

- Personal precautions** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).
- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
- Large spill** : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.
- Small spill** : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble or absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

7. Handling and storage

- Handling** : Put on appropriate personal protective equipment (see Section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Do not swallow. Do not get in eyes or on skin or clothing. Avoid breathing vapor or mist. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container. If this material is part of a multiple component system, read the Material Safety Data Sheet(s) for the other component or components before blending as the resulting mixture may have the hazards of all of its parts.
- Storage** : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. Do not store below the following temperature: 32F / 0C.

8. Exposure controls/personal protection

Name	Result	ACGIH	Ontario	Mexico	PPG
Titanium dioxide	TWA	10 mg/m ³	10 mg/m ³ TD	10 mg/m ³ (as Ti)	Not established
	STEL	Not established	Not established	20 mg/m ³ (as Ti)	Not established

Key to abbreviations

A	= Acceptable Maximum Peak	SR	= Respiratory sensitization
ACGIH	= American Conference of Governmental Industrial Hygienists.	SS	= Skin sensitization
C	= Ceiling Limit	STEL	= Short term Exposure limit values
F	= Fume	TD	= Total dust
IPEL	= Internal Permissible Exposure Limit	TLV	= Threshold Limit Value
R	= Respirable	TWA	= Time Weighted Average
S	= Potential skin absorption		

Consult local authorities for acceptable exposure limits.

- Recommended monitoring procedures** : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.
- Engineering measures** : If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.
- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protection

- Eyes** : Safety glasses with side shields.

8 . Exposure controls/personal protection

Hands	: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
Respiratory	: If workers are exposed to concentrations above the exposure limit, they must use appropriate, certified respirators. Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
Skin	: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
Environmental exposure controls	: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

9 . Physical and chemical properties

Physical state	: Liquid.
Flash point	: Closed cup: >93.33°C (>200°F)
Explosion limits	: Lower: 9.9%
Material supports combustion.	: Yes.
Color	: Not available.
Odor	: Not available.
pH	: Not available.
Boiling/condensation point	: >37.78°C (>100°F)
Melting/freezing point	: Not available.
Specific gravity	: 1.2
Density (lbs / gal)	: 10.01
Vapor pressure	: 2.4 kPa (18.3 mm Hg) [room temperature]
Vapor density	: Not available.
Volatility	: 59% (v/v), 49.47% (w/w)
Evaporation rate	: 0.37 (butyl acetate = 1)
Solubility	: Soluble in the following materials: cold water.
Partition coefficient: n-octanol/water	: Not available.
% Solid. (w/w)	: 50.53

10 . Stability and reactivity

Stability	: Stable under recommended storage and handling conditions (see Section 7).
Conditions to avoid	: No specific data.
Materials to avoid	: Reactive or incompatible with the following materials: acids, oxidizing materials, strong alkalis
Hazardous decomposition products	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Hazardous polymerization	: Under normal conditions of storage and use, hazardous polymerization will not occur.

11 . Toxicological information

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Titanium dioxide	LD50 Oral	Rat	>10 g/kg	-

Conclusion/Summary : Not available.

Chronic toxicity

Conclusion/Summary : Not available.

Target organs

: Contains material which may cause damage to the following organs: upper respiratory tract.

Carcinogenicity

Carcinogenicity

: Contains material which may cause cancer, based on animal data. Risk of cancer depends on duration and level of exposure.

Classification

Product/ingredient name	ACGIH	IARC	NTP
Titanium dioxide	A4	2B	-

Carcinogen Classification code: ACGIH: A1, A2, A3, A4, A5
 IARC: 1, 2A, 2B, 3, 4
 NTP: Known to be a human carcinogen; Reasonably anticipated to be a human carcinogen
 Not listed or regulated as a carcinogen: -

12 . Ecological information

Environmental effects : No known significant effects or critical hazards.

Aquatic ecotoxicity

Product/ingredient name	Result	Species	Exposure
Titanium dioxide	Acute LC50 >100 mg/l Fresh water	Daphnia - Daphnia magna	48 hours

13 . Disposal considerations

Waste disposal : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees. Section 6. Accidental release measures

14. Transport information

	TDG	Mexico	IMDG
UN number	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-
Transport hazard class(es)	-	-	-
Packing group	-	-	-
Environmental hazards	No.	No.	No.
Marine pollutant substances	Not applicable.	Not applicable.	Not applicable.

Additional information

TDG : None identified.

Mexico : None identified.

IMDG : None identified.

Special precautions for user : Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

15 . Regulatory information

Canada inventory (DSL) : All components are listed or exempted.

Canada

WHMIS (Canada) : Class D-2A: Material causing other toxic effects (Very toxic).

Mexico

Classification

Flammability : 1 Health : 1 Reactivity : 0

16 . Other information

Hazardous Material Information System (U.S.A.)

Health : 1 * Flammability : 1 Physical hazards : 0

(*) - Chronic effects

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on MSDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.)

Health : 1 Flammability : 1 Instability : 0

Date of previous issue : 5/29/2015

16 . Other information

Organization that prepared : EHS
the MSDS

✓ Indicates information that has changed from previously issued version.

Disclaimer

The information contained in this data sheet is based on present scientific and technical knowledge. The purpose of this information is to draw attention to the health and safety aspects concerning the products supplied by PPG, and to recommend precautionary measures for the storage and handling of the products. No warranty or guarantee is given in respect of the properties of the products. No liability can be accepted for any failure to observe the precautionary measures described in this data sheet or for any misuse of the products.

Material Safety Data Sheet



Date of issue 29 March 2011
Version 10

1. Product and company identification

Product name : PITT-TECH PLUS GLOSS DEEP
Code : 90-1330
Supplier : PPG Industries, Inc.
One PPG Place
Pittsburgh, PA 15272
Emergency telephone number : (412) 434-4515 (U.S.)
(514) 645-1320 (Canada)
01-800-00-21-400 (Mexico)
Technical Phone Number : (412) 492-5200 (ALLISON PARK, PA) 8:00 a.m. - 5:00 p.m. EST

2. Hazards identification

Emergency overview : WARNING!
MAY BE HARMFUL IF INHALED OR SWALLOWED. CONTAINS MATERIAL THAT MAY CAUSE TARGET ORGAN DAMAGE, BASED ON ANIMAL DATA.
Use only with adequate ventilation. Keep container tightly closed and sealed until ready for use. Wash thoroughly after handling.

Potential acute health effects

Inhalation : May be harmful if inhaled.
Ingestion : May be harmful if swallowed.
Skin : No known significant effects or critical hazards.
Eyes : No known significant effects or critical hazards.

Over-exposure signs/symptoms

Inhalation : No specific data.
Ingestion : No specific data.
Skin : No specific data.
Eyes : No specific data.

Medical conditions aggravated by over-exposure : Pre-existing disorders involving any target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product.

This Material Safety Data Sheet has been prepared in accordance with Canada's Workplace Hazardous Materials Information System (WHMIS) and the OSHA Hazard Communication Standard (29 CFR 1910.1200).

See toxicological information (Section 11)

3. Composition/information on ingredients

<u>Name</u>	<u>CAS number</u>	<u>%</u>
Titanium dioxide	13463-67-7	1 - 5

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

4 . First aid measures

If ingestion, irritation, any type of overexposure or symptoms of overexposure occur during or persists after use of this product, contact a POISON CONTROL CENTER, EMERGENCY ROOM OR PHYSICIAN immediately; have Material Safety Data Sheet information available. Never give anything by mouth to an unconscious or convulsing person.

- Eye contact** : Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Seek immediate medical attention.
- Skin contact** : Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognized skin cleanser. Do NOT use solvents or thinners.
- Inhalation** : Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.
- Ingestion** : If swallowed, seek medical advice immediately and show this container or label. Keep person warm and at rest. Do not induce vomiting.
- Notes to physician** : No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

5 . Fire-fighting measures

Flammability of the product : In a fire or if heated, a pressure increase will occur and the container may burst.

Extinguishing media

- Suitable** : Use an extinguishing agent suitable for the surrounding fire.
- Not suitable** : None known.
- Special exposure hazards** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
- Hazardous combustion products** : Decomposition products may include the following materials:
carbon oxides
metal oxide/oxides
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6 . Accidental release measures

- Personal precautions** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).
- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
- Large spill** : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see section 1 for emergency contact information and section 13 for waste disposal.
- Small spill** : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble or absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

7. Handling and storage

- Handling** : Put on appropriate personal protective equipment (see Section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Do not swallow. Do not get in eyes or on skin or clothing. Avoid breathing vapor or mist. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container. If this material is part of a multiple component system, read the Material Safety Data Sheet(s) for the other component or components before blending as the resulting mixture may have the hazards of all of its parts.
- Storage** : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. Do not store below the following temperature: 32F / 0C.

8. Exposure controls/personal protection

Name	Result	ACGIH	OSHA	Ontario	Mexico	PPG
Titanium dioxide	TWA	10 mg/m ³	15 mg/m ³ TD	10 mg/m ³ TD	10 mg/m ³ (as Ti)	Not established
	STEL	Not established	Not established	Not established	20 mg/m ³ (as Ti)	Not established

Key to abbreviations

A	= Acceptable Maximum Peak	S	= Potential skin absorption
ACGIH	= American Conference of Governmental Industrial Hygienists.	SR	= Respiratory sensitization
C	= Ceiling Limit	SS	= Skin sensitization
F	= Fume	STEL	= Short term Exposure limit values
IPEL	= Internal Permissible Exposure Limit	TD	= Total dust
OSHA	= Occupational Safety and Health Administration.	TLV	= Threshold Limit Value
R	= Respirable	TWA	= Time Weighted Average
Z	= OSHA 29CFR 1910.1200 Subpart Z - Toxic and Hazardous Substances		

Consult local authorities for acceptable exposure limits.

- Recommended monitoring procedures** : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.
- Engineering measures** : If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.
- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protection

- Eyes** : Safety glasses with side shields.
- Hands** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
- Respiratory** : If workers are exposed to concentrations above the exposure limit, they must use appropriate, certified respirators. Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

8 . Exposure controls/personal protection

- Skin** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

9 . Physical and chemical properties

- Physical state** : Liquid.
- Flash point** : Closed cup: >93.33°C (>200°F)
- Explosion limits** : Lower: 9.9%
- Color** : Not available.
- Odor** : Not available.
- pH** : Not available.
- Boiling/condensation point** : >37.78°C (>100°F)
- Melting/freezing point** : Not available.
- Specific gravity** : 1.08
- Density (lbs / gal)** : 9.01
- Vapor pressure** : 2.4 kPa (17.9 mm Hg) [20°C]
- Vapor density** : Not available.
- Volatility** : 62% (v/v), 56.93% (w/w)
- Odor threshold** : Not available.
- Evaporation rate** : 35 (butyl acetate = 1)
- Partition coefficient: n-octanol/water** : Not available.
- % Solid. (w/w)** : 43.07

10 . Stability and reactivity

- Stability** : Stable under recommended storage and handling conditions (see section 7).
- Conditions to avoid** : No specific data.
- Materials to avoid** : Reactive or incompatible with the following materials: acids, oxidizing materials, strong alkalis
- Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.
- Hazardous polymerization** : Under normal conditions of storage and use, hazardous polymerization will not occur.

11 . Toxicological information

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Titanium dioxide	LD50 Oral	Rat	>10 g/kg	-

Chronic toxicity

Conclusion/Summary : Not available.

Target organs : Contains material which may cause damage to the following organs: lungs, upper respiratory tract, skin.

Carcinogenicity

11 . Toxicological information

Carcinogenicity : Contains material which may cause cancer, based on animal data. Risk of cancer depends on duration and level of exposure.

Classification

Product/ingredient name	ACGIH	IARC	EPA	NIOSH	NTP	OSHA
Titanium dioxide	A4	2B	-	-	-	-

Mutagenicity

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity

Teratogenicity : No known significant effects or critical hazards.

Reproductive toxicity

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

12 . Ecological information

Environmental effects : No known significant effects or critical hazards.

Aquatic ecotoxicity

Product/ingredient name	Result	Species	Exposure
Titanium dioxide	Acute EC50 >1000000 ug/L Fresh water	Daphnia - Water flea - Daphnia magna	48 hours

13 . Disposal considerations

Waste disposal : The generation of waste should be avoided or minimized wherever possible. Significant quantities of waste product residues should not be disposed of via the foul sewer but processed in a suitable effluent treatment plant. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees. Section 6. Accidental release measures

14 . Transport information

Regulation	UN number	Proper shipping name	Classes	PG*	Additional information
UN	None.	Not regulated.	None.	-	-
IMDG	None.	Not regulated.	None.	-	-
DOT	Not regulated.	-	-	-	-

PG* : Packing group

Reportable quantity RQ : CERCLA: Hazardous substances.: ammonia: 1000 lbs. (454 kg);

15 . Regulatory information

United States inventory (TSCA 8b)	: All components are listed or exempted.
Australia inventory (AICS)	: Not determined.
Canada inventory (DSL)	: All components are listed or exempted.
China inventory (IECSC)	: At least one component is not listed.
Europe inventory (REACH)	: Please contact your supplier for information on the inventory status of this material.
Japan inventory (ENCS)	: At least one component is not listed.
Korea inventory (KECI)	: At least one component is not listed.
New Zealand (NZIoC)	: Substance Use Restricted
Philippines inventory (PICCS)	: Not determined.

United States

U.S. Federal regulations :

United States - TSCA 5(a)2 - Final significant new use rules:

Sodium nitrite Listed

SARA 302/304/311/312 extremely hazardous substances: No products were found.

SARA 302/304 emergency planning and notification: No products were found.

SARA 302/304/311/312 hazardous chemicals: Titanium dioxide

CERCLA: Hazardous substances.: ammonia: 1000 lbs. (454 kg);

SARA 311/312 MSDS Distribution - Chemical Inventory - Hazard Identification:

<u>Chemical name</u>	<u>CAS #</u>	<u>Acute</u>	<u>Chronic</u>	<u>Fire</u>	<u>Reactive</u>	<u>Pressure</u>
Titanium dioxide	13463-67-7	N	Y	N	N	N
	Product as-supplied :	N	Y	N	N	N

Additional environmental information is contained on the Environmental Data Sheet for this product, which can be obtained from your PPG representative.

Canada

WHMIS (Canada) : Class D-2A: Material causing other toxic effects (Very toxic).

Mexico

Classification

Flammability : 1 Health : 2 Reactivity : 0

16 . Other information

Hazardous Material Information System (U.S.A.)

Health : 2 * Flammability : 1 Physical hazards : 0

(*) - Chronic effects

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on MSDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.)

Health : 2 Flammability : 1 Instability : 0

Date of previous issue : 6/22/2010.

Organization that prepared the MSDS : EHS

☑ Indicates information that has changed from previously issued version.

Disclaimer

16 . Other information

The information contained in this data sheet is based on present scientific and technical knowledge. The purpose of this information is to draw attention to the health and safety aspects concerning the products supplied by PPG, and to recommend precautionary measures for the storage and handling of the products. No warranty or guarantee is given in respect of the properties of the products. No liability can be accepted for any failure to observe the precautionary measures described in this data sheet or for any misuse of the products.

Material Safety Data Sheet



Date of issue 12 March 2014

Version 18

1. Product and company identification

Product name : PITT-TECH PLUS GLOSS MID
Code : 90-1320
Supplier : PPG Industries, Inc.
One PPG Place
Pittsburgh, PA 15272
Emergency telephone number : (412) 434-4515 (U.S.)
(514) 645-1320 (Canada)
01-800-00-21-400 (Mexico)
Technical Phone Number : 888-977-4762

2. Hazards identification

Emergency overview : WARNING!
MAY BE HARMFUL IF INHALED OR SWALLOWED. CONTAINS MATERIAL THAT MAY CAUSE TARGET ORGAN DAMAGE, BASED ON ANIMAL DATA.
Use only with adequate ventilation. Keep container tightly closed and sealed until ready for use. Wash thoroughly after handling.

Potential acute health effects

Inhalation : May be harmful if inhaled.
Ingestion : May be harmful if swallowed.
Skin : No known significant effects or critical hazards.
Eyes : No known significant effects or critical hazards.

Over-exposure signs/symptoms

Inhalation : No specific data.
Ingestion : No specific data.
Skin : No specific data.
Eyes : No specific data.

Medical conditions aggravated by over-exposure : Pre-existing disorders involving any target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product.

This Material Safety Data Sheet has been prepared in accordance with Canada's Workplace Hazardous Materials Information System (WHMIS) and the OSHA Hazard Communication Standard (29 CFR 1910.1200).

See toxicological information (Section 11)

3. Composition/information on ingredients

<u>Name</u>	<u>CAS number</u>	<u>%</u>
Titanium dioxide	13463-67-7	7 - 13

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

4. First aid measures

If ingestion, irritation, any type of overexposure or symptoms of overexposure occur during or persists after use of this product, contact a POISON CONTROL CENTER, EMERGENCY ROOM OR PHYSICIAN immediately; have Material Safety Data Sheet information available. Never give anything by mouth to an unconscious or convulsing person.

- Eye contact** : Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Seek immediate medical attention.
- Skin contact** : Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognized skin cleanser. Do NOT use solvents or thinners.
- Inhalation** : Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.
- Ingestion** : If swallowed, seek medical advice immediately and show this container or label. Keep person warm and at rest. Do NOT induce vomiting.
- Notes to physician** : No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

5. Fire-fighting measures

- Flammability of the product** : In a fire or if heated, a pressure increase will occur and the container may burst.
- Extinguishing media**
- Suitable** : Use an extinguishing agent suitable for the surrounding fire.
- Not suitable** : None known.
- Special exposure hazards** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
- Hazardous combustion products** : Decomposition products may include the following materials:
carbon oxides
metal oxide/oxides
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6. Accidental release measures

- Personal precautions** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).
- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
- Large spill** : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.
- Small spill** : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble or absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

7. Handling and storage

- Handling** : Put on appropriate personal protective equipment (see Section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Do not swallow. Do not get in eyes or on skin or clothing. Avoid breathing vapor or mist. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container. If this material is part of a multiple component system, read the Material Safety Data Sheet(s) for the other component or components before blending as the resulting mixture may have the hazards of all of its parts.
- Storage** : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. Do not store below the following temperature: 32F / 0C.

8. Exposure controls/personal protection

Name	Result	ACGIH	OSHA	Ontario	Mexico	PPG
Titanium dioxide	TWA	10 mg/m ³	15 mg/m ³ TD	10 mg/m ³ TD	10 mg/m ³ (as Ti)	Not established
	STEL	Not established	Not established	Not established	20 mg/m ³ (as Ti)	Not established

Key to abbreviations

A = Acceptable Maximum Peak	S = Potential skin absorption
ACGIH = American Conference of Governmental Industrial Hygienists.	SR = Respiratory sensitization
C = Ceiling Limit	SS = Skin sensitization
F = Fume	STEL = Short term Exposure limit values
IPEL = Internal Permissible Exposure Limit	TD = Total dust
OSHA = Occupational Safety and Health Administration.	TLV = Threshold Limit Value
R = Respirable	TWA = Time Weighted Average
Z = OSHA 29CFR 1910.1200 Subpart Z - Toxic and Hazardous Substances	

Consult local authorities for acceptable exposure limits.

- Recommended monitoring procedures** : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.
- Engineering measures** : If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.
- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Personal protection**
- Eyes** : Safety glasses with side shields.

8 . Exposure controls/personal protection

- Hands** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
- Respiratory** : If workers are exposed to concentrations above the exposure limit, they must use appropriate, certified respirators. Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
- Skin** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

9 . Physical and chemical properties

- Physical state** : Liquid.
- Flash point** : Closed cup: >93.33°C (>200°F)
- Explosion limits** : Lower: 9.9%
- Material supports combustion.** : Yes.
- Color** : Not available.
- Odor** : Not available.
- pH** : Not available.
- Boiling/condensation point** : >37.78°C (>100°F)
- Melting/freezing point** : Not available.
- Specific gravity** : 1.14
- Density (lbs / gal)** : 9.51
- Vapor pressure** : 2.4 kPa (18.3 mm Hg) [room temperature]
- Vapor density** : Not available.
- Volatility** : 61% (v/v), 53.31% (w/w)
- Evaporation rate** : 0.38 (butyl acetate = 1)
- Solubility** : Soluble in the following materials: cold water.
- Partition coefficient: n-octanol/water** : Not available.
- % Solid. (w/w)** : 46.69

10 . Stability and reactivity

- Stability** : Stable under recommended storage and handling conditions (see Section 7).
- Conditions to avoid** : No specific data.
- Materials to avoid** : Reactive or incompatible with the following materials: acids, oxidizing materials, strong alkalis
- Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.
- Hazardous polymerization** : Under normal conditions of storage and use, hazardous polymerization will not occur.

11 . Toxicological information

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Titanium dioxide	LD50 Oral	Rat	>10 g/kg	-

Conclusion/Summary : Not available.

Chronic toxicity

Conclusion/Summary : Not available.

Target organs

: Contains material which may cause damage to the following organs: upper respiratory tract.

Carcinogenicity

Carcinogenicity : Contains material which may cause cancer, based on animal data. Risk of cancer depends on duration and level of exposure.

Classification

Product/ingredient name	ACGIH	IARC	NTP	OSHA
Titanium dioxide	A4	2B	-	-

Carcinogen Classification code: ACGIH: A1, A2, A3, A4, A5
IARC: 1, 2A, 2B, 3, 4
NTP: Proven, Possible
OSHA: +
Not listed or regulated as a carcinogen: -

12 . Ecological information

Environmental effects : No known significant effects or critical hazards.

13 . Disposal considerations

Waste disposal : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees. Section 6. Accidental release measures

14. Transport information

	DOT	TDG	Mexico	IMDG
UN number	Not regulated.	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	Not regulated.	Not regulated.	Not regulated.	Not regulated.
Transport hazard class(es)	-	-	-	-
Packing group	-	-	-	-

14. Transport information

Environmental hazards	No.	No.	No.	No.
Marine pollutant substances	Not applicable.	Not applicable.	Not applicable.	Not applicable.

Additional information

DOT : None identified.
 TDG : None identified.
 Mexico : None identified.
 IMDG : None identified.

Special precautions for user : Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

15. Regulatory information

United States inventory (TSCA 8b) : All components are listed or exempted.
 Australia inventory (AICS) : At least one component is not listed.
 Canada inventory (DSL) : All components are listed or exempted.
 China inventory (IECSC) : At least one component is not listed.
 Europe inventory (REACH) : Please contact your supplier for information on the inventory status of this material.
 Japan inventory (ENCS) : At least one component is not listed.
 Korea inventory (KECI) : At least one component is not listed.
 New Zealand (NZIoC) : Substance Use Restricted
 Philippines inventory (PICCS) : At least one component is not listed.

United States

U.S. Federal regulations :
 United States - TSCA 5(a)2 - Final significant new use rules:
 sodium nitrite Listed
 United States - TSCA 5(a)2 - Proposed significant new use rules:
 bis(2-(2-methoxyethoxy)ethyl) ether Listed
 SARA 302/304: No products were found.
 CERCLA: Hazardous substances.: ammonia: 1000 lbs. (454 kg);

SARA 311/312 SDS Distribution - Chemical Inventory - Hazard Identification:

Chemical name	CAS #	Acute	Chronic	Fire	Reactive	Pressure
Titanium dioxide	13463-67-7	N	Y	N	N	N
Product as-supplied :		N	Y	N	N	N

Additional environmental information is contained on the Environmental Data Sheet for this product, which can be obtained from your PPG representative.

Canada

WHMIS (Canada) : Class D-2A: Material causing other toxic effects (Very toxic).

Mexico

Classification

Flammability : 1 Health : 1 Reactivity : 0

16 . Other information

Hazardous Material Information System (U.S.A.)

Health : 1 * Flammability : 1 Physical hazards : 0

(*) - Chronic effects

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on MSDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.)

Health : 1 Flammability : 1 Instability : 0

Date of previous issue : 10/3/2013.

Organization that prepared the MSDS : EHS

☑ Indicates information that has changed from previously issued version.

Disclaimer

The information contained in this data sheet is based on present scientific and technical knowledge. The purpose of this information is to draw attention to the health and safety aspects concerning the products supplied by PPG, and to recommend precautionary measures for the storage and handling of the products. No warranty or guarantee is given in respect of the properties of the products. No liability can be accepted for any failure to observe the precautionary measures described in this data sheet or for any misuse of the products.

Material Safety Data Sheet



Date of issue 20 October 2015

Version 13.02

1. Product and company identification

Product name : PITT-TECH PLUS GL DP/RSTC
Code : 90-1340
Supplier : PPG Industries, Inc.
One PPG Place
Pittsburgh, PA 15272
Emergency telephone number : (412) 434-4515 (U.S.)
(514) 645-1320 (Canada)
01-800-00-21-400 (Mexico)
Technical Phone Number : 888-977-4762

2. Hazards identification

Emergency overview : CAUTION!
MAY BE HARMFUL IF INHALED OR SWALLOWED.
Avoid prolonged contact with eyes, skin and clothing. Use only with adequate ventilation. Keep container tightly closed and sealed until ready for use. Wash thoroughly after handling.

Potential acute health effects

Inhalation : May be harmful if inhaled.
Ingestion : May be harmful if swallowed.
Skin : No known significant effects or critical hazards.
Eyes : No known significant effects or critical hazards.

Over-exposure signs/symptoms

Inhalation : No specific data.
Ingestion : No specific data.
Skin : No specific data.
Eyes : No specific data.

Medical conditions aggravated by over-exposure : None known.

This Material Safety Data Sheet has been prepared in accordance with Canada's Workplace Hazardous Materials Information System (WHMIS).

See toxicological information (Section 11)

3. Composition/information on ingredients

There are no ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

4. First aid measures

If ingestion, irritation, any type of overexposure or symptoms of overexposure occur during or persists after use of this product, contact a POISON CONTROL CENTER, EMERGENCY ROOM OR PHYSICIAN immediately; have Material Safety Data Sheet information available. Never give anything by mouth to an unconscious or convulsing person.

- Eye contact** : Remove contact lenses, irrigate copiously with clean, fresh water, holding the eyelids apart for at least 10 minutes and seek immediate medical advice.
- Skin contact** : Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognized skin cleanser. Do NOT use solvents or thinners.
- Inhalation** : Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.
- Ingestion** : If swallowed, seek medical advice immediately and show this container or label. Keep person warm and at rest. Do NOT induce vomiting.
- Notes to physician** : No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

5. Fire-fighting measures

Flammability of the product : In a fire or if heated, a pressure increase will occur and the container may burst.

Extinguishing media

- Suitable** : Use an extinguishing agent suitable for the surrounding fire.
- Not suitable** : None known.
- Special exposure hazards** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
- Hazardous combustion products** : Decomposition products may include the following materials:
carbon oxides
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6. Accidental release measures

- Personal precautions** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment (see Section 8).
- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
- Large spill** : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.
- Small spill** : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble or absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

7. Handling and storage

- Handling** : Put on appropriate personal protective equipment (see Section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Do not swallow. Avoid breathing vapor or mist. Avoid contact with eyes, skin and clothing. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container. If this material is part of a multiple component system, read the Material Safety Data Sheet(s) for the other component or components before blending as the resulting mixture may have the hazards of all of its parts.
- Storage** : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. Do not store below the following temperature: 32F / 0C.

8. Exposure controls/personal protection

- Recommended monitoring procedures** : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.
- Engineering measures** : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.
- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Personal protection**
- Eyes** : Safety glasses with side shields.
- Hands** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
- Respiratory** : If workers are exposed to concentrations above the exposure limit, they must use appropriate, certified respirators. Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
- Skin** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

9 . Physical and chemical properties

Physical state	: Liquid.
Flash point	: Closed cup: >93.33°C (>200°F)
Explosion limits	: Lower: 9.9%
Color	: Not available.
Odor	: Not available.
pH	: Not available.
Boiling/condensation point	: >37.78°C (>100°F)
Melting/freezing point	: Not available.
Specific gravity	: 1.04
Density (lbs / gal)	: 8.68
Vapor pressure	: 2.5 kPa (18.4 mm Hg) [room temperature]
Vapor density	: Not available.
Volatility	: 65% (v/v), 61.87% (w/w)
Evaporation rate	: 0.38 (butyl acetate = 1)
Solubility	: Insoluble in the following materials: cold water.
Partition coefficient: n-octanol/water	: Not available.
% Solid. (w/w)	: 38.13

10 . Stability and reactivity

Stability	: Stable under recommended storage and handling conditions (see Section 7).
Conditions to avoid	: No specific data.
Materials to avoid	: Reactive or incompatible with the following materials:,oxidizing materials,strong acids, strong alkalis
Hazardous decomposition products	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Hazardous polymerization	: Under normal conditions of storage and use, hazardous polymerization will not occur.

11 . Toxicological information

Acute toxicity

Conclusion/Summary : Not available.

Chronic toxicity

Conclusion/Summary : Not available.

12 . Ecological information

Environmental effects : No known significant effects or critical hazards.

13 . Disposal considerations

Waste disposal : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid

13 . Disposal considerations

dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees. Section 6. Accidental release measures

14. Transport information

	TDG	Mexico	IMDG
UN number	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-
Transport hazard class(es)	-	-	-
Packing group	-	-	-
Environmental hazards	No.	No.	No.
Marine pollutant substances	Not applicable.	Not applicable.	Not applicable.

Additional information

TDG : None identified.

Mexico : None identified.

IMDG : None identified.

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

15 . Regulatory information

Canada inventory (DSL) : All components are listed or exempted.

Canada

WHMIS (Canada) : None identified.

Mexico

Classification

Flammability : 1 Health : 1 Reactivity : 0

16 . Other information

Hazardous Material Information System (U.S.A.)

Health : 1 Flammability : 1 Physical hazards : 0

(*) - Chronic effects

16 . Other information

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on MSDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.)

Health : 1 Flammability : 1 Instability : 0

Date of previous issue : 5/29/2015

Organization that prepared the MSDS : EHS

▣ Indicates information that has changed from previously issued version.

Disclaimer

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SAFETY DATA SHEET

This form complies with OSHA Hazardous Communication Standard, 29 CFR 1910.1200.

SECTION 1- Product and Company Identification

Product: Skysol®

Synonyms: MIL-PRF-680 type 4

Company Identification:

Inland Technology Incorporated • 401 East 27th Street • Tacoma, WA 98421

Product Information: 1-800-552-3100

Transportation Emergencies: 1-800-255-3924

Date: May 28, 2015

SDS No. G15018

Product Number: FS000

SECTION 2 –Hazards Identification

CLASSIFICATION:

Flammable liquid: Category 4.

Skin Irritation, Category 2

Eye Irritation, Category 2A

Skin Sensitization, Category 1.

Aspiration toxicant: Category 1.

LABEL:

Pictogram:



Signal Word:

Danger

Hazard Statements:

H227: Combustible liquid. H304: May be fatal if swallowed and enters airways. . H315 – Causes skin irritation. H317 – May cause an allergenic skin reaction. H319 – Causes serious eye irritation

Precautionary Statements:

Prevention: P210: Keep away from flames and hot surfaces. -- No smoking. P261 – Avoid breathing dust, fume, gas, mist, vapors, spray. P280: Wear protective gloves and eye / face protection.

Response: P301 + P310: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. P303 + P361 + P353 – IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse Skin with water/shower. P305 + P351 + P338 – IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P331: Do NOT induce vomiting. P333 + P313 – IF SKIN irritation or rash occurs: Get medical advice/attention. P337 + P313 – If eye irritation persists: Get medical advice/attention. P370 + P378: In case of fire: Use water fog, foam, dry chemical or carbon dioxide (CO2) to extinguish.

Storage: P403 + P235: Store in a well-ventilated place. Keep cool. P405: Store locked up.

Disposal: P501: Dispose of contents and container in accordance with local regulations.

SAFETY DATA SHEET: Skysol®

SECTION 3 – Composition/Information on Ingredients

COMPONENTS	CAS #	Concentration
C12-C13 Paraffinic Hydrocarbons	64742-48-9	proprietary
d-Limonene	5989-27-5	proprietary

SECTION 4 – First Aid Measures

Emergency and First-Aid Procedures:

Eyes: If eye contact occurs, flush with water for at least 15 minutes or until irritation subsides. If irritation persists contact physician.

Skin: In case of skin contact, remove any contaminated clothing and wash skin thoroughly with soap and water.

Inhalation: If overcome by vapor, remove from exposed area and call physician immediately.

Ingestion: DO NOT induce vomiting; call physician immediately.

If conditions persist get medical attention.

SECTION 5 - Fire Fighting Measures

Flash point: 152°F PMCC

Flammable Limits: - LEL: .6% UEL: 7%

Autoignition Temperature: 689°F

Extinguishing Media: Foam, water spray (fog), dry chemical, or carbon dioxide.

Special Fire Fighting Procedures: Wear air supplied breathing equipment for enclosed and confined spaces or as otherwise needed. Use water to cool container. Water may not extinguish the fire.

Unusual Fire and Explosion Hazards: None known.

SECTION 6 - Accidental Release Measures

Steps to Take in Case Material is Released: Shut off and eliminate all ignitable sources. Stop leak. Contain and collect material. Absorb residue.

SECTION 7 - Handling and Storage

Handling: Avoid contact with skin. Keep away from heat, sparks, and open flame.

Handling temperature and pressure: Ambient

Static Accumulator: This material is a static accumulator. To reduce potential for static discharge, bond and ground containers when transferring material.

Storage: Store away from heat, sparks, and open flame. Keep container sealed when not in use.

Storage temperature and pressure: Ambient

Suitable storage materials and coatings: Carbon steel, stainless steel, most metal containers.

SECTION 8 – Exposure Controls/Personal Protection

COMPONENTS	CAS #	PEL	TLV	OTHER

SAFETY DATA SHEET: Skysol®

C12-C13 Paraffinic Hydrocarbons	64742-48-9	Not listed	Not listed	
d-Limonene	5989-27-5	Not listed	Not listed	

Engineering Controls

Ventilation: Mechanical ventilation not normally required unless product is heated and/or is atomized in a confined space.

Other Engineering Controls: Eye wash or sterile eye rinse. Keep container closed. Do not store near heat, flame, or other ignition sources.

Work Practices: Read and understand all cautions, labels, and MSDS before using this product.

Hygiene Practices: Do not have food or drink in the vicinity. Minimize breathing vapor or mist. Avoid prolonged or repeated contact with skin. Wash contaminated clothing before reuse.

Personal Protection Equipment

Respirator: None normally required.

Gloves: Use chemical resistant gloves.

Eye Protection: Use splash goggles or face shield when eye contact may occur.

Other Protective Equipment: None normally required.

SECTION 9 – Physical/Chemical Properties

Initial Boiling Point: 340°F

Specific Gravity (H₂O=1): .77

Vapor Pressure (@ 20°C in mmHg): <1

Vapor Density (air=1): >4.5

Evaporation Rate (n-Butyl Acetate=1): <.1

Solubility: Not water soluble

Volatile by Volume: 100%

Appearance and Odor: Clear with mild citrus odor

SECTION 10 – Stability and Reactivity Data

Chemical Incompatibility: Avoid contact with strong acids and strong oxidizing agents.

Hazardous Decomposition Products: CO_x and hydrocarbons

Hazardous Polymerization: Will not occur

Stability: Stable

SECTION 11 – Toxicological Information

Signs and Symptoms of Overexposure

Acute Health Effects: Product contacting eyes may cause eye irritation. Low order of acute oral and dermal toxicity.

Chronic Health Effects: Prolonged or repeated skin exposure can lead to mild irritation, defatting and dermatitis.

Carcinogenic Ingredients: None

Primary Routes of Entry: Eyes and inhalation.

Medical Conditions Aggravated by Exposure: May aggravate existing dermatitis.

C12-C13 Paraffinic Hydrocarbons	Oral LD50	>10 gm/kg
	Dermal LD50	>3 gm/kg
	Inhalation LC50	>12mg/l

SAFETY DATA SHEET: Skysol[®]

d-Limonene	Oral LD50	>5 gm/kg
	Dermal LD50	>5 gm/kg

SECTION 12 – Ecological Information

Ecotoxicological Information:

C12-C13 Paraffinic Hydrocarbons:

96-hour LC50 (Minnow) : >5000mg/l

96-hour LC50 (Chaetogammarus Marinus) >1000mg/l

This material is classified as oil by the CWA/OPA.

Do not discharge this product into public waters or waterways unless authorized by a National Pollution Discharge Elimination System (NPDES) permit issued by the Environmental Protection Agency (EPA).

Mobility:

Material is volatile and will partition rapidly to air. The material is insoluble in water. If released to water the product will float. Not expected to partition to sediment and wastewater solids.

Persistence and degradability:

This material is expected to biodegrade at a moderate rate and be 'inherently' biodegradable. This product can degrade rapidly in air.

Bio-accumulation: Product is not expected to bioaccumulate. No acute toxicity to aquatic organisms is expected at the maximum water solubility of this product.

See additional information in sections 6, 13, & 15.

SECTION 13 – Disposal Considerations

Waste Disposal Method: Contact federal, state, county or local environmental regulatory agencies for guidance. This material is considered non-hazardous by RCRA. See Section 15 for further regulatory concerns.

SECTION 14 – Transportation Information

Land transport DOT

Containers of 119 gallons capacity or less: this product is not regulated by DOT.

DOT Class: Not regulated

Containers of 120 gallon capacity or more:

DOT Class: Combustible Liquid

ID-Number: NA1993

Packaging group: III

Proper Shipping Name: Combustible Liquid

Technical Name: (paraffinic hydrocarbons)

SAFETY DATA SHEET: Skysol®

Maritime transport IMDG: Not regulated

Air transport IATA: Not regulated

Note: This product is not typically sold in container larger than 55 gallons. In containers of 119 gallons capacity or less, this product is not regulated by DOT.

SECTION 15 – Regulatory Information

EPCRA: This material contains no extremely hazardous substances.

CERCLA (Superfund): This material is not subject to any special reporting under the requirements of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA).

SARA (301-304): No TPQ for product or any constituents.

SARA (311/312): Reportable Hazard Categories: Fire.

SARA (313) TRI: This material contains no toxic chemicals subject to the reporting requirements of the Toxic Release Program.

RCRA: This material is considered non-hazardous by characteristic.

RCRA: This material contains no hazardous chemicals listed under RCRA lists or TCLP.

OSHA: Combustible

TSCA: All components of this product are listed on the TSCA inventory, listed CAS# 64742-48-9. This product does not contain any polychlorinated biphenyls.

CWA/OPA: This product is classified as oil under Section 311 of the Clean Water Act and the Oil Pollution Act of 1990.

SECTION 16 – Other Information

NFPA Hazard code Health: 1 Flammability: 2 Reactivity: 0

HMIS Hazard code Health: 1 Flammability: 2 Reactivity: 0

Keep All Chemicals Out of the Reach of Children.

The information and recommendations contained herein are presented in good faith and believed to be correct and reliable to the best of Inland Technology's knowledge. Inland Technology, or its distributors, do not warrant or guarantee reliability, and shall not be liable for any loss or damage arising out of the use thereof. Contact Inland to confirm, in advance of need, that the information is current, applicable, and suitable to each circumstance.

SAFETY DATA SHEET: Skysol®

LABEL:

Skysol®



Danger

Combustible liquid. May be fatal if swallowed and enters airways. Causes skin irritation. May cause an allergenic skin reaction. Causes serious eye irritation.

Keep away from flames and hot surfaces. -- No smoking. Avoid breathing dust, fume, gas, mist, vapors, spray. Wear protective gloves and eye / face protection.

IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse Skin with water/shower. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Do NOT induce vomiting. IF SKIN irritation or rash occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention. In case of fire: Use water fog, foam, dry chemical or carbon dioxide (CO₂) to extinguish. Store in a well-ventilated place. Keep cool. P405: Store locked up. Dispose of contents/container in accordance with all local, regional, national and international regulations.

Inland Technology Incorporated
401 East 27th Street, Tacoma, WA 98421
253-383-1177

SAFETY DATA SHEET

This form complies with OSHA Hazardous Communication Standard, 29 CFR 1910.1200.

SECTION 1- Product and Company Identification

Product: EP-921®

Synonyms: NSNs: 6850-01-381-4408 & 6850-01-381-3300

Company Identification:

Inland Technology Incorporated • 401 East 27th Street • Tacoma, WA 98421

Product Information: 1-800-552-3100

Transportation Emergencies: 1-800-255-3924

Date: May 28, 2015

SDS No. G15023

Product Number: FE921

SECTION 2 –Hazards Identification

CLASSIFICATION:

Flammable liquid: Category 4.

Skin Irritation, Category 2

Eye Irritation, Category 2A

Skin Sensitization, Category 1.

LABEL:

Pictogram:



Signal Word:

Warning

Hazard Statements:

H227: Combustible liquid. H315 – Causes skin irritation. H317 – May cause an allergenic skin reaction.

H319 – Causes serious eye irritation

Precautionary Statements:

Prevention: P210: Keep away from flames and hot surfaces. -- No smoking. P261 – Avoid breathing dust, fume, gas, mist, vapors, spray. P280: Wear protective gloves and eye / face protection.

Response: P303 + P361 + P353 – IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse Skin with water/shower. P305 + P351 + P338 – IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P331: Do NOT induce vomiting. P333 + P313 – IF SKIN irritation or rash occurs: Get medical advice/attention. P337 + P313 – If eye irritation persists: Get medical advice/attention. P370 + P378: In case of fire: Use water fog, foam, dry chemical or carbon dioxide (CO₂) to extinguish.

Storage: P403 + P235: Store in a well-ventilated place. Keep cool. P405: Store locked up.

Disposal: P501 – Dispose of contents/container in accordance with all local, regional, national and international regulations.

SECTION 3 – Composition/Information on Ingredients

SAFETY DATA SHEET: EP-921

COMPONENTS	CAS #	Concentration
Tripropylene glycol methyl ether	25498-49-1	proprietary
Propylene Carbonate	108-32-7	proprietary
d-Limonene	5989-27-5	proprietary

SECTION 4 – First Aid Measures

Emergency and First-Aid Procedures:

Eyes: If eye contact occurs, flush with water for at least 15 minutes or until irritation subsides. If irritation persists contact physician.

Skin: In case of skin contact, remove any contaminated clothing and wash skin thoroughly with soap and water.

Inhalation: If overcome by vapor, remove from exposed area and call physician immediately.

Ingestion: DO NOT induce vomiting; call physician immediately.

If conditions persist, get medical attention.

SECTION 5 - Fire Fighting Measures

Flash point: 146°F PMCC

Flammable Limits: - LEL: .6% UEL: 7%

Autoignition Temperature: N/A

Extinguishing Media: Foam, water spray (fog), dry chemical, or carbon dioxide.

Special Fire Fighting Procedures: Wear air supplied breathing equipment for enclosed and confined spaces or as otherwise needed. Use water to cool container. Water may not extinguish the fire.

Unusual Fire and Explosion Hazards: None known.

SECTION 6 - Accidental Release Measures

Steps to Take in Case Material is Released: Shut off and eliminate all ignitable sources. Stop leak. Contain and collect material. Absorb residue.

SECTION 7 - Handling and Storage

Handling: Avoid contact with skin. Keep away from heat, sparks, and open flame.

Handling temperature and pressure: Ambient

Static Accumulator: This material is a static accumulator. To reduce potential for static discharge, bond and ground containers when transferring material.

Storage: Store away from heat, sparks, and open flame. Keep container sealed when not in use.

Storage temperature and pressure: Ambient

Suitable storage materials and coatings: Carbon steel, stainless steel, most metal containers.

SAFETY DATA SHEET: EP-921

SECTION 8 – Exposure Controls/Personal Protection

COMPONENTS	CAS #	PEL	TLV	OTHER
Tripropylene glycol methyl ether	25498-49-1	Not Listed	Not Listed	
Propylene Carbonate	108-32-7	Not Listed	Not Listed	
d-Limonene	5989-27-5	Not Listed	Not Listed	

Engineering Controls

Ventilation: Mechanical ventilation not normally required unless product is heated and/or is atomized in a confined space.

Other Engineering Controls: Eye wash or sterile eye rinse. Keep container closed. Do not store near heat, flame, or other ignition sources.

Work Practices: Read and understand all cautions, labels, and MSDS before using this product.

Hygiene Practices: Do not have food or drink in the vicinity. Minimize breathing vapor or mist. Avoid prolonged or repeated contact with skin. Wash contaminated clothing before reuse.

Personal Protection Equipment

Respirator: None normally required.

Gloves: Use chemical resistant gloves.

Eye Protection: Use splash goggles or face shield when eye contact may occur.

Other Protective Equipment: None normally required.

SECTION 9 – Physical/Chemical Properties

Initial Boiling Point: 340°F

Specific Gravity (H₂O=1): .98

Vapor Pressure (@ 20°C in mmHg): <1

Vapor Density (air=1): >4

Evaporation Rate (n-Butyl Acetate=1): <.02

Solubility: very slight (water)

Volatile by Volume: 17%

Appearance and Odor: Clear with mild citrus odor

SECTION 10 – Stability and Reactivity Data

Chemical Incompatibility: Avoid contact with strong acids and strong oxidizing agents.

Hazardous Decomposition Products: CO_x and hydrocarbons

Hazardous Polymerization: Will not occur

Stability: Stable

SECTION 11 – Toxicological Information

Signs and Symptoms of Overexposure

Acute Health Effects: Product contacting eyes may cause eye irritation. Low order of acute oral and dermal toxicity.

Chronic Health Effects: Prolonged or repeated skin exposure can lead to mild irritation, defatting and dermatitis.

Carcinogenic Ingredients: None

Primary Routes of Entry: Eyes and inhalation.

SAFETY DATA SHEET: EP-921

Medical Conditions Aggravated by Exposure: May aggravate existing dermatitis.

Tripropylene glycol methyl ether	Oral LD50	>3 gm/kg
	Dermal LD50	>5 gm/kg
Propylene Carbonate	Oral LD50	>5 gm/kg
	Dermal LD50	>3 gm/kg
	Inhalation	>1 gm/m ³
d-Limonene	Oral LD50	>5 gm/kg
	Dermal LD50	>5 gm/kg

SECTION 12 – Ecological Information

Ecotoxicological Information:

d-Limonene is classified as oil by the CWA/OPA.

Do not discharge this product into public waters or waterways unless authorized by a National Pollution Discharge Elimination System (NPDES) permit issued by the Environmental Protection Agency (EPA).

Tripropylene glycol methyl ether	LC50 (96 hour)	>11 gm/l
Propylene Carbonate	LC50 (96 hour)	>1 gm/l

Mobility:

d-Limonene is volatile and will partition to air. Tripropylene glycol methyl ether is not volatile but is water soluble.

Persistence and degradability:

This material is expected to biodegrade at a rapid rate and be 'inherently' biodegradable. This product can degrade rapidly in air.

Bio-accumulation: Product is not expected to bioaccumulate
See additional information in sections 6, 13, & 15.

SECTION 13 – Disposal Considerations

Waste Disposal Method: Contact federal, state, county or local environmental regulatory agencies for guidance. This material is considered non-hazardous by RCRA. See Section 15 for further regulatory concerns.

SECTION 14 – Transportation Information

Land transport DOT

SAFETY DATA SHEET: EP-921

Containers of 119 gallons capacity or less: this product is not regulated by DOT.

DOT Class: Not regulated

Containers of 120 gallon capacity or more:

DOT Class: Combustible Liquid

ID-Number: NA1993

Packaging group: III

Proper Shipping Name: Combustible Liquid

Technical Name: (d-Limonene)

Maritime transport IMDG: Not regulated

Air transport IATA: Not regulated

Note: This product is not typically sold in container larger than 55 gallons. In containers of 119 gallons capacity or less, this product is not regulated by DOT.

SECTION 15 – Regulatory Information

EPCRA: This material contains no extremely hazardous substances.

CERCLA (Superfund): This material is not subject to any special reporting under the requirements of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA).

SARA (301-304): No TPQ for product or any constituents.

SARA (311/312): Reportable Hazard Categories: Fire.

SARA (313) TRI: This material contains no toxic chemicals subject to the reporting requirements of the Toxic Release Program.

RCRA : This material is considered non-hazardous by characteristic.

RCRA: This material contains no hazardous chemicals listed under RCRA lists or TCLP.

OSHA: Combustible

TSCA: All components of this product are listed on the TSCA inventory. This product does not contain any polychlorinated biphenyls.

SECTION 16 – Other Information

NFPA Hazard code: Health: 1 Flammability: 2 Reactivity: 0

HMIS Hazard code: Health: 1 Flammability: 2 Reactivity: 0

Keep All Chemicals Out of the Reach of Children.

The information and recommendations contained herein are presented in good faith and believed to be correct and reliable to the best of Inland Technology's knowledge. Inland Technology, or its distributors, do not warrant or guarantee reliability, and shall not be liable for any loss or damage arising out of the use thereof. Contact Inland Technology to confirm, in advance of need, that the information is current, applicable, and suitable to each circumstance.

SAFETY DATA SHEET: EP-921

LABEL:

EP-921®



Warning

Combustible liquid. Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation

Keep away from flames and hot surfaces. -- No smoking. Avoid breathing dust, fume, gas, mist, vapors, spray. Wear protective gloves and eye / face protection.

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse Skin with water/shower. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Do NOT induce vomiting. IF SKIN irritation or rash occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention. In case of fire: Use water fog, foam, dry chemical or carbon dioxide (CO₂) to extinguish.

Store in a well-ventilated place. Keep cool. Store locked up. Dispose of contents/container in accordance with all local, regional, national and international regulations.

Inland Technology Incorporated
401 East 27th Street, Tacoma, WA 98421
253-383-1177

Attachment E

Supporting Calculations

Table 1
 SPM Flow Control, Inc
 52 Norwins Dr
 Buckhannon, West Virginia 26201
 FACILITY EMISSIONS SUMMARY (Potential to Emit)

Potential to Emit

Unit Name	Emission Source	Control	Emission Point	Max Operation Schedule (hrs/yr)	VOC Emission		PM Emissions (Uncontrolled)		PM Emissions (Controlled)		HAPs		Nox		CO		SO2	
					(TPY)	lbs/hr	(TPY)	lbs/hr	(TPY)	lbs/hr	(TPY)	lbs/hr	(TPY)	lbs/hr	(TPY)	lbs/hr	(TPY)	lbs/hr
Paint Booth	1S	1C	1E	3650	1.369	0.75	0.65	0.35	0.0116	0.0063	0.00	0.00	-	-	-	-	-	-
Parts Washer	2S, 3S, & 4S	NA	2E, 3E, 4E	8760	0.193	0.40	-	-	-	-	-	-	-	-	-	-	-	-
Paint Gun Cleaner	5S	NA	1E	3650	0.021	0.09	-	-	-	-	-	-	-	-	-	-	-	-
Totals	-	-	-	-	1.582	1.24	0.65	0.35	0.0116	0.0063	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Expected Actual Emissions

Unit Name	Emission Source	Control	Emission Point	Max Operation Schedule (hrs/yr)	VOC Emission		PM Emissions		PM Emissions		HAPs		Nox		CO		SO2	
					(TPY)	lbs/yr	(TPY)	lbs/yr	(TPY)	lbs/yr	(TPY)	lbs/yr	(TPY)	lbs/yr	(TPY)	lbs/yr	(TPY)	lbs/yr
Paint Booth	1S	1C	1E	1788	0.671	0.75	0.317	0.35	0.0057	0.0063	0.000	0.00	-	-	-	-	-	-
Parts Washer	2S, 3S, & 4S	NA	2E, 3E, 4E	8760	0.193	0.40	-	-	-	-	-	-	-	-	-	-	-	-
Paint Gun Cleaner	5S	NA	1E	1788	0.021	0.09	-	-	-	-	-	-	-	-	-	-	-	-
Totals	-	-	-	-	0.884	1.24	0.32	0.35	0.0057	0.0063	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

- General hours of operation are 16.5 hours per day, 5 days per week and 52 weeks per year (i.e., 4250 hours per year).
- Emissions are calculated on maximum paint hours (3650) as described in Appendix C Section 1.5. Expected paint hours will not exceed 1788.
- lbs/hr - pounds per hour. An hourly paint use of one gallon/hour was used to calculate hourly emission rates based on rates of similar guns in similar facilities.
- A yearly paint usage of 3650 gallons was used for calculating annual emissions based on one gal/hr paint use and max hours of 3650.
- A yearly parts washer solvent use of 60 gal/yr per washer was used to calculate the annual emissions.
- A yearly paint gun washer solvent use of 30 gal/yr was used to calculate the annual emissions.
- HAP hourly and annual emissions were based on using the coating with the highest HAP content of 0.0 lbs/gal.
- VOC hourly and annual emissions were based on using the coating with the highest VOC content of 0.75 lbs/gal.
- PM₁₀ hourly and annual emissions were based on the coating with the highest solids content of 5.06 lbs/gal.

Notes:

1. Percent content is considered as the maximum value of the ranges provided in the MSDS.
2. "HAP" and "H" stand for hazardous air pollutant.
3. Product Density and VOC content are obtained from MSDS.
4. Solids content is determined from manufacturer provided values
5. Solvent/paint usage is based on 1 gal/hr flow rate through the gun and 3650 hours maximum per year painting.
6. The VOC emissions in the booths include the coating and drying.
7. The PM emissions are calculated based on a transfer efficiency (TE) of 65%, fall off factor (FF) of 80% and filter efficiency (FE) of 99.21%.

Sample VOC Calculations (PPG Pitt-Tech Plus Gloss White 90-1310)

Annual VOC Emissions (Tons/Year)	=	$(\text{VOC content (lbs/gal)} * \text{max coating used/year (gal/yr)}) / 2000 \text{ lbs/ton}$
	=	$(0.75 \text{ lbs/gal} * 3650 \text{ gal/yr}) / 2000$
	=	1.37 ton/yr
Hourly VOC Emissions (lbs/hr)	=	$(\text{VOC content (lbs/gal)} * \text{max coating used/hr (gal/hr)})$
	=	$(0.75 \text{ lbs/gal} * 1 \text{ gal/hr})$
	=	0.75 lbs/hr
Annual Component HAP Emissions (Tons/Year)	=	$(\text{Component content \%} * \text{Product density (lbs/gal)} * \text{max coating used/year (gal/yr)}) / 2000$
	=	$((0.00\% * 8.65 \text{ lbs/gal}) * 3650 \text{ gal/yr}) / 2000$
	=	0.00 ton/yr
Hourly Component HAP Emissions (lbs/hr)	=	$(\text{Component content \%} * \text{Product density (lbs/gal)} * \text{max coating used/hour (gal/hr)})$
	=	$((0.00\% * 8.65 \text{ lbs/gal}) * 1 \text{ gal/hr})$
	=	0.00 lbs/hr

Sample Controlled PM Calculations (PPG Pitt-Tech Plus Gloss White 90-1310)

Annual PM Emissions (tons/year)	65.00%
Transfer Efficiency (TE)	80.00%
Fall-out Factor (FF)	99.74%
Filter Efficiency (FE)	
Hourly PM Emissions (lb/hr)	

Annual PM Emissions (tons/year)	=	$(\text{Solids Content (lbs/gal)} * \text{max coating use/yr}) * (1-TE) * (1-FF) * (1-FE) / 2000$
	=	$(\text{Solids Content (lbs/gal)} * 3650 \text{ gal/yr}) * (1-.65) * (1-.8) * (1-.9821) / 2000$
	=	0.0116 tons/yr
Hourly PM Emissions (lb/hr)	=	$(\text{Solids Content (lbs/gal)} * \text{max coating use/hr}) * (1-TE) * (1-FF) * (1-FE)$
	=	$(\text{Solids Content (lbs/gal)} * 1 \text{ gal/hr}) * (1-.65) * (1-.8) * (1-.9821)$
	=	0.0063 lbs/hr

Table 3
SPM Flow Control, Inc
52 Norwins Dr
Buckhannon, West Virginia 26201
Fugitive Emissions

EPN	Item	Total Annual VOC Emission (lbs/hr)	Total Annual VOC Emissions (tons/year)	Annual Throughput (gals/year)	Throughput (gal/day)	Throughput gal/hr
2E, 3E, & 4E	Parts Washer (3 units)	0.4013	0.1926	60	1.5	0.0625
1E	Clean-up Solvents - Plant gun cleaner	0.0869	0.0209	30	1.5	0.0625
	Total	0.4881	0.2135			

IT-48WC washer contains 42 gallons of solvent
IT-200 gun cleaner contains 12 gallons of solvent

Notes

Operation hours		
1 Year	52	Weeks
1 Week	7	Days
1 Day	24	Hours
Skysol Solvent (Parts Washer)		
Skysol Solvent Purchased	80	gallons
Waste Skysol Solvent	20	gallons
Skysol Used (Evaporated)	60	gallons
EP-921 (Gun Clean-up Solvent)		
EP-921 Solvent Purchased	50	gallons
Waste EP-921 Solvent	20	gallons
EP-921 Used (Evaporated)	30	gallons

Solvent Name/Content	CAS Number	Max Content %	HAP	Product Density (lbs/gal)	VOC Content (lbs/gal)	Solids Content (lbs/gal)	Max Hourly Solvent Used (gals/hr)	Max Annual Solvent Used (gals/yr)	PTE VOC Emissions			PTE PM Emissions		
									Annual VOC Emissions (tpy)	Hourly VOC Emissions (lbs/hr)	Annual PM ₁₀ Emissions (tpy)	Hourly PM ₁₀ Emissions (lbs/hr)		
Skysol Solvent (Parts Washer)														
C12-13 Paraffinic Hydrocarbons	64742-48-9	99.5	-	6.42	6.42	0.00	0.0625	60	0.1926	0.4013	0.00	0.00		
d-Limonene	5989-27-5	0.3	-	-	V	-	-	-	0.1916	0.3992	-	-		
EP-921 (Gun Clean-up Solvent)														
Tripropylene glycol methylene ether	25498491	100	-	8.17	1.39	0.00	0.0625	30	0.0209	0.0869	0.00	0.00		
Propylene Carbonate	108-32-7	100	-	-	V	-	-	-	0.1226	0.0869	-	-		
d-Limonene	5989-27-5	0.3	-	-	V	-	-	-	0.0004	0.0003	-	-		

Notes:

1. Percent content is considered as the maximum value of the range provided in the MSDS
2. "HAP" stands for hazardous air pollutant
3. Product density and volatile organic compound (VOC) (less water and federally exempt solvents) content are obtained from the MSDS
4. No Solids content expected
5. The material usage rate in gallons/hr and gallons/yr is estimated.
6. The VOC emissions are calculated based on an assumed usage rate.
7. The particulate matter (PM) emission are calculated based on an assumed usage rate.

Attachment F

Permit Determination Form



WEST VIRGINIA
 DEPARTMENT OF ENVIRONMENTAL PROTECTION
 DIVISION OF AIR QUALITY
 601 57th Street, SE
 Charleston, WV 25304
 Phone: (304) 926-0475
 www.dep.wv.gov/daq

**PERMIT DETERMINATION FORM
(PDF)**

FOR AGENCY USE ONLY: PLANT I.D. # _____
 PDF # _____ PERMIT WRITER: _____

1. NAME OF APPLICANT (AS REGISTERED WITH THE WV SECRETARY OF STATE'S OFFICE):

S.P.M. Flow Control, Inc

2. NAME OF FACILITY (IF DIFFERENT FROM ABOVE):

S.P.M. Flow Control, Inc. - Buckhannon

3. NORTH AMERICAN INDUSTRY CLASSIFICATION SYSTEM (NAICS) CODE:

811310

4A. MAILING ADDRESS:

52 Norwins Dr
 Buckhannon, WV 25201

4B. PHYSICAL ADDRESS: :

52 Norwins Dr
 Buckhannon, WV 25201

5A. DIRECTIONS TO FACILITY (PLEASE PROVIDE MAP AS ATTACHMENT A):

From Buckhannon, WV head north on WV-20 for .06 miles, merge onto US-119 S/US-33 W and head west for about 3.2 miles, then turn left onto Finks Run Road and travel .2 miles to the destination.

5B. NEAREST ROAD:

US-119 S

5C. NEAREST CITY OR TOWN:

Buckhannon

5D. COUNTY:

Upshur

5E. UTM NORTHING (KM):

4317.57546 m

5F. UTM EASTING (KM):

561.68433 m

5G. UTM ZONE:

17 S

6A. INDIVIDUAL TO CONTACT IF MORE INFORMATION IS REQUIRED:

Mike Dickerson

6B. TITLE:

Env & Sustainability Eng

6C. TELEPHONE:

817-248-2611

6D. FAX:

6E. E-MAIL:

Mike.dickerson@weirspm.com

7A. DAQ PLANT I.D. NO. (FOR AN EXISTING FACILITY ONLY):

NA -

7B. PLEASE LIST ALL CURRENT 45CSR13, 45CSR14, 45CSR19 AND/OR TITLE V (45CSR30) PERMIT NUMBERS ASSOCIATED WITH THIS PROCESS (FOR AN EXISTING FACILITY ONLY):

NA

7C. IS THIS PDF BEING SUBMITTED AS THE RESULT OF AN ENFORCEMENT ACTION? IF YES, PLEASE LIST: No

8A. TYPE OF EMISSION SOURCE (CHECK ONE):

NEW SOURCE ADMINISTRATIVE UPDATE
 MODIFICATION OTHER (PLEASE EXPLAIN IN 11B)

8B. IF ADMINISTRATIVE UPDATE, DOES DAQ HAVE THE APPLICANT'S CONSENT TO UPDATE THE EXISTING PERMIT WITH THE INFORMATION CONTAINED HEREIN?

NA YES NO

9. IS DEMOLITION OR PHYSICAL RENOVATION AT AN EXISTING FACILITY INVOLVED? YES NO

10A. DATE OF ANTICIPATED INSTALLATION OR CHANGE:

07/02/2014

10B. DATE OF ANTICIPATED START-UP:

07/02/2014

11A. PLEASE PROVIDE A DETAILED PROCESS FLOW DIAGRAM SHOWING EACH PROPOSED OR MODIFIED PROCESS EMISSION POINT AS ATTACHMENT B.

11B. PLEASE PROVIDE A DETAILED PROCESS DESCRIPTION AS ATTACHMENT C.

12. PLEASE PROVIDE MATERIAL SAFETY DATA SHEETS (MSDS) FOR ALL MATERIALS PROCESSED, USED OR PRODUCED AS ATTACHMENT D. FOR CHEMICAL PROCESSES, PLEASE PROVIDE A MSDS FOR EACH COMPOUND EMITTED TO AIR.

13A. REGULATED AIR POLLUTANT EMISSIONS:

⇒ FOR A NEW FACILITY, PLEASE PROVIDE PLANT WIDE EMISSIONS BASED ON THE POTENTIAL TO EMIT (PTE) FOR THE FOLLOWING AIR POLLUTANTS INCLUDING ALL PROCESSES.

⇒ FOR AN EXISTING FACILITY, PLEASE PROVIDE THE PROPOSED CHANGE IN EMISSIONS BASED ON THE PTE OF ALL PROCESS CHANGES FOR THE FOLLOWING AIR POLLUTANTS.

PTE FOR A GIVEN POLLUTANT IS TYPICALLY BEFORE AIR POLLUTION CONTROL DEVICES AND IS COLLECTED BASED ON THE MAXIMUM DESIGN CAPACITY OF PROCESS EQUIPMENT.

POLLUTANT	HOURLY PTE (LB/HR)	YEARLY PTE (TON/YR) (HOURLY PTE MULTIPLIED BY 8760 HR/YR) DIVIDED BY 2000 LB/TON
PM	.0063	.0116
PM ₁₀	.0063	.0116
VOCs	1.24	1.582
CO	0	0
NO _x	0	0
SO ₂	0	0
Pb	0	0
HAPs (AGGREGATE AMOUNT)	0	0
TAPs (INDIVIDUALLY)*	0	0
OTHER (INDIVIDUALLY)*	0	0

* ATTACH ADDITIONAL PAGES AS NEEDED

13B. PLEASE PROVIDE ALL SUPPORTING CALCULATIONS AS ATTACHMENT E.

CALCULATE AN HOURLY AND YEARLY PTE OF EACH PROCESS EMISSION POINT (SHOWN IN YOUR DETAILED PROCESS FLOW DIAGRAM) FOR ALL AIR POLLUTANTS LISTED ABOVE INCLUDING INDIVIDUAL HAP'S (LISTED IN SECTION 112(b) OF THE 1990 CAAA), TAP'S (LISTED IN 45CSR27), AND OTHER AIR POLLUTANTS (E.G. POLLUTANTS LISTED IN TABLE 45-13A OF 45CSR13, MINERAL ACIDS PER 45CSR7, ETC.).

14. CERTIFICATION OF DATA

I, WILLIAM MARSHALL (TYPE NAME) ATTEST THAT ALL THE REPRESENTATIONS CONTAINED IN THIS APPLICATION, OR APPENDED HERETO, ARE TRUE, ACCURATE, AND COMPLETE TO THE BEST OF MY KNOWLEDGE BASED ON INFORMATION AND BELIEF AFTER REASONABLE INQUIRY, AND THAT I AM A **RESPONSIBLE OFFICIAL**** (PRESIDENT, VICE PRESIDENT, SECRETARY OR TREASURER, GENERAL PARTNER OR SOLE PROPRIETOR) OF THE APPLICANT.

SIGNATURE OF RESPONSIBLE OFFICIAL: _____



TITLE: VP AND GM US SERVICE CENTERS

DATE: 08, 02, 2016

** THE DEFINITION OF THE PHRASE 'RESPONSIBLE OFFICIAL' CAN BE FOUND AT 45CSR13, SECTION 2.23.

NOTE: PLEASE CHECK ENCLOSED ATTACHMENTS:

ATTACHMENT A ATTACHMENT B ATTACHMENT C ATTACHMENT D ATTACHMENT E

RECORDS ON ALL CHANGES ARE REQUIRED TO BE KEPT AND MAINTAINED ON-SITE FOR TWO (2) YEARS.

THE PERMIT DETERMINATION FORM WITH THE INSTRUCTIONS CAN BE FOUND ON DAQ'S PERMITTING SECTION WEB SITE:

www.dep.wv.gov/daq

Attachment G

Regulatory Review

Regulatory Applicability Review

45-13-2.24 Stationary Source Definition – As noted below the surface coating facility does not have the potential to exceed the emission thresholds for the air pollutants listed in 45-13-2.24.b, 45-13-2.24.c and 45-13-2.24.d and therefore does not meet the definition of stationary source.

45-13-2.24.b - Discharges or has the potential to discharge more than six (6) pounds per hour and ten (10) tons per year, or has the potential to discharge more than 144 pounds per calendar day, of any regulated air pollutant. This surface coating facility, based on the calculations provided in Attachment E Table 1, has the potential to emit VOC at .75 lb/hr or 7.5 lb/day or 1.37 TPY and PM at .0063 lb/hr or .063 lb/day or .0116 TPY.

45-13-2.24.c - Discharges or has the potential to discharge more than two (2) pounds per hour or five (5) tons per year of hazardous air pollutants considered on an aggregated basis. This surface coating facility, based on the calculations provided in Attachment E Table 1, will not emit any HAPs.

45-13-2.24.d - Discharges or has the potential to discharge any air pollutant(s) listed in Table 45- 13A in the amounts shown in Table 45-13A or greater. Based on the SDS for the materials to be used in this surface coating facility it will not discharge any of the air pollutants listed in Table 45-13A in any quantities.

45-13-5.4 Submittal of a permit to construction or operate a stationary source – As noted above the facility does not meet the definition of a stationary source due to the potential emissions of air pollutants. As this facility is not a stationary source a permit to construct or operate does not appear to be required.

45-7-10.5 Exempt from subsection 4.1 permitting for source(s) of emissions that have a potential to emit less than one (1) pound per hour of particulate matter and an aggregate of less than one thousand (1000) pounds per year for all such sources of particulate matter located at the stationary source. This surface coating facility, based on the calculations provided in Attachment E Table 1, has the potential to emit PM at .0063 lb/hr or 22.995 lb/year which is below the threshold in the rule and therefore is exempt from permitting under this rule.

Table 45-7A Allowable stack emission rate/hr per process weight rate/hr – the process weight rate cannot be calculated because it consists of miscellaneous pieces or vary weights and quantities for any given period. The PM emissions are directly related to the time period for painting and the flow rate of the paint. The highest weigh paint is 10.01 lb/gallon and the flow rate of paint is 1 gallon per hour therefore the process weight rate would be 10.01 lb/hr. As a Type'a' source operation the extrapolated allowable emission rate would be .0012 lbs/hr per process weight rate or .012 lb/hr at 10.01 process weight rate. This surface coating

facility, based on the calculations provided in Attachment E Table 1, has the potential to emit PM at .0063 lb/hr and therefore emits less than the allowable PM.

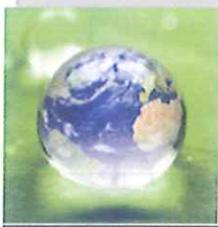
45-21 Regulation of Volatile Organic Compounds – The facility is located in Upshur County and the regulation does not apply to this facility. In addition the coating used will contain 0.75 lb/gallon of VOC with potential daily VOC emissions of 7.5 pounds. The facility is exempt from 45-21 regulations due to the facility location and potential VOC emissions.

40 CFR 63 Subpart HHHHHH Paint Stripping and Miscellaneous Surface Coating at Area Sources - this regulation does not apply to the facility as the coatings to be used do not contain the target chemicals.

40 CFR 63 Subpart XXXXXX Nine Metal Fabrication and Finishing Source Categories - this regulation does not apply to the facility as the coatings to be used do not contain the target chemicals.

Attachment H

Equipment Information



INLAND TECHNOLOGY INCORPORATED
TECHNICAL DATA SHEET



IT-48WC™
PARTSWASHER/WEAPONS CLEANING SYSTEM

NSN: 4933-01-397-2539

GSA ADVANTAGE
CONTRACT NUMBER: GS-07F0156N
KIT481CS45G

The Inland Technology IT-48WC™ Partswasher/Weapons Cleaning System is designed for high-volume usage. It has a dual-system design, which allows a number of individuals to clean weapons or parts simultaneously.

The IT-48WC™ is equipped with Inland Technology's EDGE TEK™ Filtration System, a unique element which filters down to .1 micron nominal. When properly managed, this system, used with Inland's BREAKTHROUGH® solvent, generally extends solvent life for several years. Documented waste reduction in DoD averages 99% per installation for this waste stream.

The IT-48WC™ has been designed as a remote reservoir partswasher. It meets or exceeds most air quality requirement for remote reservoir solvent cleaning.

The KIT481CS45G provides the IT-48WC™ with both 45 gallons of BREAKTHROUGH® along with a case of EDGE TEK™ and Resin Filters (12x1 filters) at a discounted price through GSA Advantage.



Specifications:

Overall Dimensions:	53" L x 33" W x 69" H	Flex Nozzle:	18" Long
Inside Tub Dimensions:	48" L x 28" W x 10" H	Dual Flow-thru Brushes:	48" Long
Pump System:	500 GPH Pump	Tub Thickness:	13 Gauge Steel
Drain Basket:	3 1/4" Diameter	Solvent Capacity:	42 Gallons
Parts & Drain Baskets:	Stainless Steel	2 Parts Baskets:	3 1/4" Diameter
Remote Reservoir Dimensions:	48" x 28" W x 8" H		

Headquarters: Inland Technology Incorporated • 401 East 27th Street • Tacoma, Washington 98421
 Phones: Tacoma (253) 383-1177 • (800) 552-3100 • Fax (253) 593-8749
 Email: inland@inlandtech.com • www.inlandtech.com

06-10-13

Inland Technology Incorporated

Pollution Prevention By Design

IT-200™ PAINT GUN CLEANER / RECLAMATION SYSTEM

The **IT-200™** is designed to use and reclaim Inland Technology's environmentally responsible cleaning solvents **EP-921™**, **EP-1088™**, and **DRY SOL™**. These solvents are high flash point non-HAP, low VOC replacements for MEK and Lacquer thinner,

The **IT-200™** automatically cleans cup guns and is complete with a flow-thru brush for hand detailing. The **IT-200™** also has integral hose cleaning attachments for cleaning small pots and lines.

The **IT-200™** makes use of the on board **EDGE TEK™* Micro Filtration** that filters down to .1 micron nominal. This system allows for extended reuse of the cleaning solution.

FEATURES:

- Flow-thru hose and brush
- Automatic Lid Closure when not in use
- Hose cleaning cycle
- Automatic cleaning cycle
- Hand cleaning cycle
- .1 Micron Nominal Filtration ensures extended use of cleaning solution lowers operating costs, and reduces waste

CONSTRUCTION: Stainless Steel

OPERATION: Air Operated Double Diaphragm Pump

OVERALL DIMENSIONS: 38" L X 22" W X 42" H



401 East 27th Street, Tacoma, WA 98421
(253) 383-1177 • (800) 552-3100
inland@inlandtech.com

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* EDGE TEK™ Filtration Patent Pending
P070710

Paint Gun Flow Rate Determination

Through communications with the supplier for the paint guns, they indicated the manufacturer will not provide a flow rate for a given gun due the variables of air pressure and paint material viscosity. Based on actual usage records from over 11 facilities with a variety of gravity fed guns across the country, below is a summary table of those records indicating a maximum flow rate of .79 gal/hr. We have used 1 gal/hr flow rate for the paint gun in our submitted calculations to account for those variables. Therefore our calculated maximum potential to emit using the more conservative flow rate of one gallon is greater than the maximum potential to emit based on actual flow data.

Paint hours	Paint gal	Avg gal/hr	
15598.88	3477.12	0.22	
		5707.00	Total Data Points
		0.79	Max gal/hr
		0.10	Min gal/hr
		0.38	Median gal/hr



20 oz. Professional HVLP Gravity Feed Air Spray Gun

CENTRALPNEUMATIC

Central Pneumatic • 604000143

High volume, low pressure paint gun provides best mix



Description

CENTRALPNEUMATIC

High volume, low pressure for high output with lower pressure. This HVLP gravity feed spray gun is better for the environment. High volume, low pressure for better results. Use this HVLP spray gun to get professional results spraying interior and exterior based paints.

- Best mix of paint and air pressure
- High volume, low pressure sprayer reduces overspray
- Adjustable pattern and volume control
- High-quality nickel plated finish

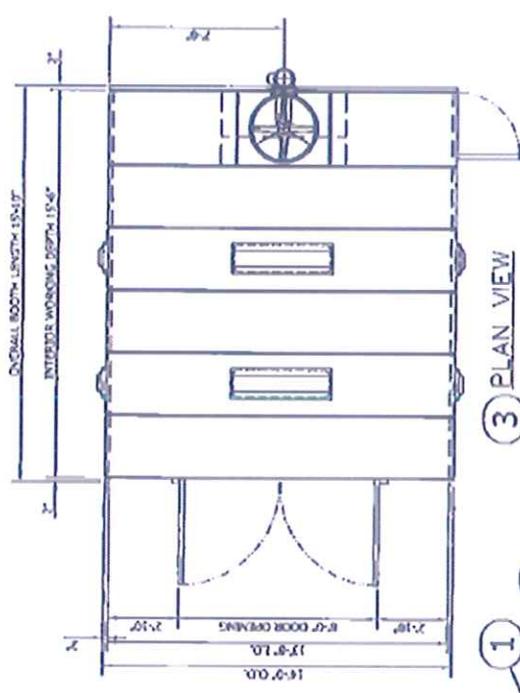
Specifications

Name	20 oz., Professional HVLP Gravity Feed Air Spray Gun
SKU	60343
Brand	Central Pneumatic
Average air consumption	15 CFM @ 40 PSI
Maximum pressure (PSI)	50 PSI
Quantity	1
Working pressure (psi)	15-50 PSI
Air inlet size	1/4 in.-18 NPS
Container size	20 oz.
Product Height	12-1/2 in.
Product Length	6-3/4 in.
Product Width	4 in.
Recommended hose size (in.)	3/8 in.
Shipping Weight	2.70 lb.

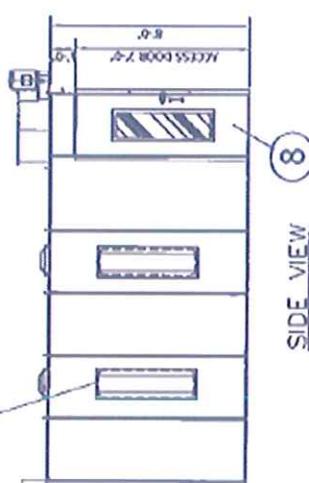
UNITS AND PARTS LIST:

Support: 12 @ 20" JUM 804
 Support: 8 @ 12" JUM 804

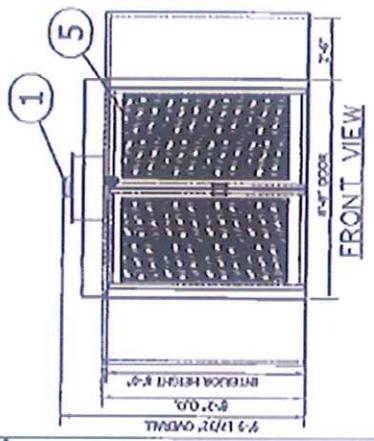
ITEM	QTY.	PART #	DESCRIPTION
1	ONE	BRAND	30" DIA. TUBULAR PER UNIT FOR 10" DIA. SOFT EXHAUST @ 2" STAG. COP TYPE MOTOR 3 HP.
2	ONE		MANIFOLD FOR EXHAUST CHAMBER.
3	5	# 20	LIGHT FIXTURES: POLY TUBE 48" X 18" WITH PARTIALS PROVIDED BEYOND CLEAR TEMPERED GLASS LL LATER. (OPEN TYPE)
4	20		EXHAUST FILTERS (OFFERED SUPPLIED WITH FILTER GRIDS)
5	1		GRID OF FILTERED DOOR WITH VITRILE FILTERS, DOOR LATCH, HANDLES AND DOOR SWAGER.
6	1	CH-200-100-1	CONTROL PANEL (TO BE MOUNTED TO COMPLY WITH LOCAL CODES AND AT LEAST 30" FROM ANY OBSTACLE)
7			DUCT PACKAGE (3) 20" P.A.M. PIPE (NOT SHOWN)
8	1	AG-200-100-1	PERSONNEL ACCESS DOOR: 30" X 48" X 10" OBSERVATION WINDOW; LATCH & HANDLE



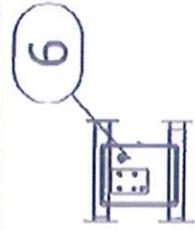
3 PLAN VIEW



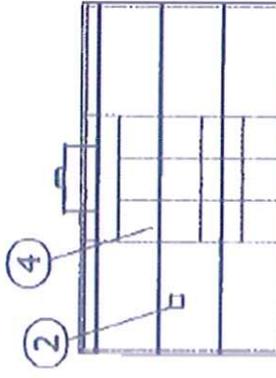
8 SIDE VIEW



5 FRONT VIEW



6



2, 4, END VIEW

ADDITIONAL DUCTWORK SUPPORT TO SUFF FIELD CONDITIONS TO BE SUPPLIED BY OTHERS. ALL ANCHOR BOLTS TO BE SUPPLIED BY OTHERS.

CO-MET SPRAY BOOTHS ARE MANUFACTURED IN ACCORDANCE WITH NATIONAL BOOTH WALLS & CEILING PANELS FABRICATED OF 18 GA. GALVANNEED STEEL IN ACCORDANCE WITH NFPA CLASS CHAPTER 1.1.4.

SEE ORDER ACKNOWLEDGMENT FOR COMPLETE LIST OF INCLUDED STOCK AND OPTIONAL COMPONENTS.

EXHAUST FAN: 30" DIA. TUBULAR PER UNIT FOR 10" DIA. SOFT EXHAUST @ 2" STAG. COP TYPE MOTOR 3 HP.

MANIFOLD FOR EXHAUST CHAMBER.

EXHAUST FILTERS (OFFERED SUPPLIED WITH FILTER GRIDS)

GRID OF FILTERED DOOR WITH VITRILE FILTERS, DOOR LATCH, HANDLES AND DOOR SWAGER.

CONTROL PANEL (TO BE MOUNTED TO COMPLY WITH LOCAL CODES AND AT LEAST 30" FROM ANY OBSTACLE)

DUCT PACKAGE (3) 20" P.A.M. PIPE (NOT SHOWN)

PERSONNEL ACCESS DOOR: 30" X 48" X 10" OBSERVATION WINDOW; LATCH & HANDLE

COLMET

CO-MET SPRAY BOOTHING
 MANUFACTURING CO.
 1000 W. 100th St., Dept. 100
 Minneapolis, MN 55428
 (612) 835-1111

44179 10-24-08-15-SS

DESIGNED BY: COLMET
 DRAWN BY: COLMET
 CHECKED BY: COLMET
 APPROVED BY: COLMET

NO DOORS INSTALLED

PAINT ARRESTANCE FILTER TEST REPORT

Spray Removal Efficiency & Paint Holding Capacity

BASED ON 40 CFR PART 63 NATIONAL EMISSION STANDARD

Tested for: Chemco Mfg. Co.
Filter Mfr.: Chemco Mfg. Co.
Filter Name: DUO
Report#/Test#: R 827 T 927
Report Date: January 3, 2010

Test Information

FILTER DESCRIPTION: (20"x20")

Green on white highloft glass pad

PAINT DESCRIPTION:

High Solids Baking Enamel (S.W. #1 Permaclad 2400, red)

PAINT SPRAY METHOD:

Conventional Air Gun at 40 PSI

SPRAY FEED RATE:

141 gr./min. 135 cc/min.

AIR VELOCITY:

150 FPM

Test Results

INITIAL PRESSURE DROP of Clean Test Filter

0.01 in. water

FINAL PRESSURE DROP of Loaded Test Filter

0.05 in. water

WEIGHT GAIN OF FILTER & TEST FRAME THROUGH

4147 grams

PAINT HOLDING CAPACITY of TEST FILTER

842 grams = 1.9 lbs.

PAINT RUN-OFF

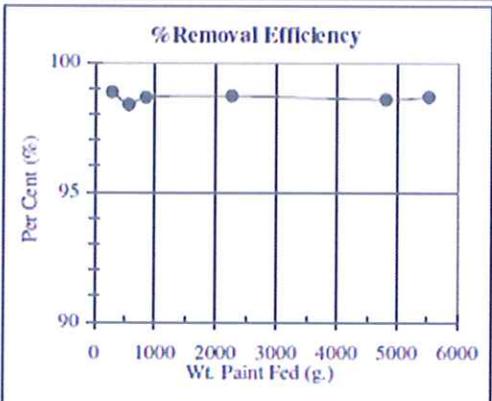
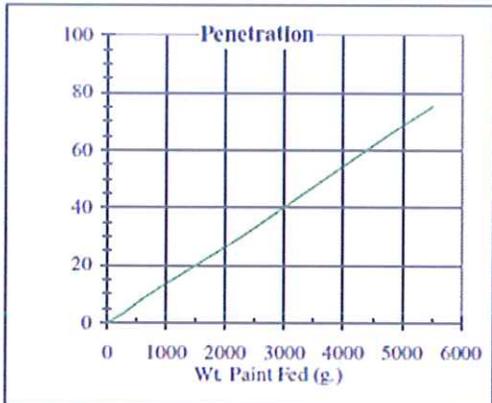
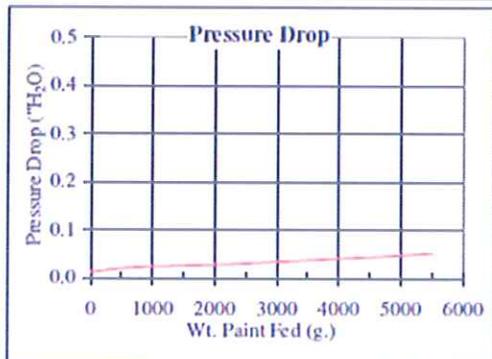
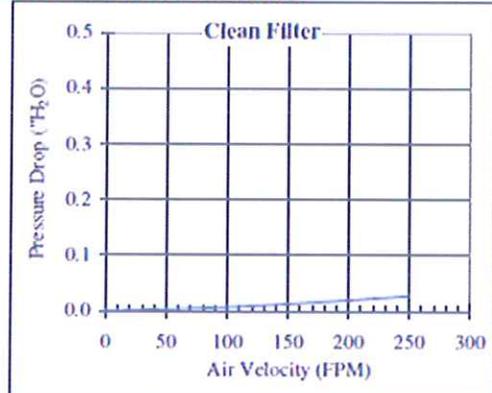
3305 grams

WEIGHT GAIN on FINAL FILTER

75.4 grams = PENETRATION

AVERAGE REMOVAL EFFICIENCY of TEST FILTER

98.21 %



Test Engineer: Todd Kruger

Supervising Engineer: K. C. Kwok, Ph.D.