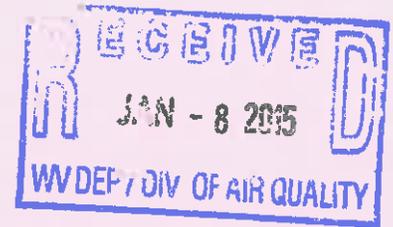


Table of Contents



Application for NSR Permit

\$3500 Check for Application Fees (\$1000 R13 fee plus \$2500 NESHAP fee)

Attachment A Business Certificate

Attachment D Regulatory Discussion

Attachment E Plot Plans

Attachment F Process Flow Diagrams

Attachment G Process Description

Attachment H Material Safety Data Sheets

Attachment I Emission Units Table

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**"REDACTED COPY
CLAIM OF CONFIDENTIALITY"**



WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF AIR QUALITY

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

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

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

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

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

- ADMINISTRATIVE AMENDMENT MINOR MODIFICATION
 SIGNIFICANT MODIFICATION

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

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

Section I. General

1. Name of applicant (as registered with the WV Secretary of State's Office):

E.I. du Pont de Nemours and Company

2. Federal Employer ID No. (FEIN):

911077773

3. Name of facility (if different from above):

Belle Plant

4. The applicant is the:

- OWNER OPERATOR BOTH

5A. Applicant's mailing address:

901 West DuPont Avenue

Belle, WV 25015

5B. Facility's present physical address:

901 West DuPont Avenue

Belle, WV 25015

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

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

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

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

- If YES, please explain: Owns

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

9. Type of plant or facility (stationary source) to be **constructed, modified, relocated, administratively updated** or **temporarily permitted** (e.g., coal preparation plant, primary crusher, etc.): Storage Tanks at Chemical Manufacturing facility

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

325199

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

039 - 00001

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

R30-03900001-2011 (5 of 5)

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



12A.		
<ul style="list-style-type: none"> For Modifications, Administrative Updates or Temporary permits at an existing facility, please provide directions to the <i>present location</i> of the facility from the nearest state road; For Construction or Relocation permits, please provide directions to the <i>proposed new site location</i> from the nearest state road. Include a MAP as Attachment B. 		
Exit U.S. Route 60 at the Belle exit; turn right onto old Route 60; travel 500 feet west; turn left to enter the main gate of the DuPont Belle plant.		
12.B. New site address (if applicable):	12C. Nearest city or town: Belle, WV	12D. County: Kanawha
12.E. UTM Northing (KM): 451.848	12F. UTM Easting (KM): 4,232.589	12G. UTM Zone: 17
13. Briefly describe the proposed change(s) at the facility: Four tanks (vintage 1935) at or near the end of their useful life are replaced with four new tanks		
14A. Provide the date of anticipated installation or change: / / <ul style="list-style-type: none"> If this is an After-The-Fact permit application, provide the date upon which the proposed change did happen: Construction began 07/21/2014 		14B. Date of anticipated Start-Up if a permit is granted: Two of the tanks January 2015; the other two mid-2015
14C. Provide a Schedule of the planned Installation of/ Change to and Start-Up of each of the units proposed in this permit application as Attachment C (if more than one unit is involved). N/A		
15. Provide maximum projected Operating Schedule of activity/activities outlined in this application: Hours Per Day 24 Days Per Week 7 Weeks Per Year 52		
16. Is demolition or physical renovation at an existing facility involved? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		
17. Risk Management Plans. If this facility is subject to 112(r) of the 1990 CAAA, or will become subject due to proposed changes (for applicability help see www.epa.gov/ceppo), submit your Risk Management Plan (RMP) to U. S. EPA Region III.		
18. Regulatory Discussion. List all Federal and State air pollution control regulations that you believe are applicable to the proposed process (<i>if known</i>). A list of possible applicable requirements is also included in Attachment S of this application (Title V Permit Revision Information). Discuss applicability and proposed demonstration(s) of compliance (<i>if known</i>). Provide this information as Attachment D .		
Section II. Additional attachments and supporting documents.		
19. Include a check payable to WVDEP – Division of Air Quality with the appropriate application fee (per 45CSR22 and 45CSR13).		
20. Include a Table of Contents as the first page of your application package.		
21. Provide a Plot Plan , e.g. scaled map(s) and/or sketch(es) showing the location of the property on which the stationary source(s) is or is to be located as Attachment E (Refer to Plot Plan Guidance). <ul style="list-style-type: none"> Indicate the location of the nearest occupied structure (e.g. church, school, business, residence). 		
22. Provide a Detailed Process Flow Diagram(s) showing each proposed or modified emissions unit, emission point and control device as Attachment F .		
23. Provide a Process Description as Attachment G . <ul style="list-style-type: none"> Also describe and quantify to the extent possible all changes made to the facility since the last permit review (if applicable). 		
<i>All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.</i>		

24. Provide **Material Safety Data Sheets (MSDS)** for all materials processed, used or produced as **Attachment H**.
 – For chemical processes, provide a MSDS for each compound emitted to the air.

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

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

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

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

<input type="checkbox"/> Bulk Liquid Transfer Operations	<input type="checkbox"/> Haul Road Emissions	<input type="checkbox"/> Quarry
<input type="checkbox"/> Chemical Processes	<input type="checkbox"/> Hot Mix Asphalt Plant	<input type="checkbox"/> Solid Materials Sizing, Handling and Storage Facilities
<input type="checkbox"/> Concrete Batch Plant	<input type="checkbox"/> Incinerator	<input checked="" type="checkbox"/> Storage Tanks
<input type="checkbox"/> Grey Iron and Steel Foundry	<input type="checkbox"/> Indirect Heat Exchanger	
<input type="checkbox"/> General Emission Unit, specify		

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

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

<input type="checkbox"/> Absorption Systems	<input type="checkbox"/> Baghouse	<input checked="" type="checkbox"/> Flare
<input type="checkbox"/> Adsorption Systems	<input type="checkbox"/> Condenser	<input type="checkbox"/> Mechanical Collector
<input type="checkbox"/> Afterburner	<input type="checkbox"/> Electrostatic Precipitator	<input type="checkbox"/> Wet Collecting System
<input type="checkbox"/> Other Collectors, specify		

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

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

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

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

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

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

YES NO

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

Section III. Certification of Information

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

<input type="checkbox"/> Authority of Corporation or Other Business Entity	<input type="checkbox"/> Authority of Partnership
<input type="checkbox"/> Authority of Governmental Agency	<input type="checkbox"/> Authority of Limited Partnership

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

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

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

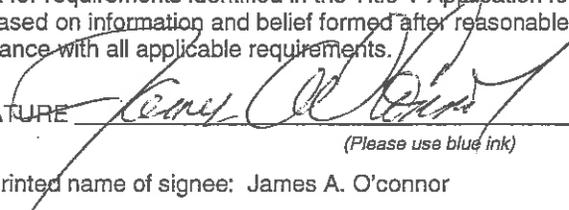
Certification of Truth, Accuracy, and Completeness

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

Compliance Certification

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

SIGNATURE



(Please use blue ink)

DATE:

01/05/2015

(Please use blue ink)

35B. Printed name of signee: James A. O'Connor

35C. Title: Plant Manager

35D. E-mail: jim.a.oconnor@dupont.com

36E. Phone: 304-357-1200

36F. FAX: 304-357-1204

36A. Printed name of contact person (if different from above): LeAnne. S. Wheeler

36B. Title: Environmental Coordinator

36C. E-mail:
leanne.schottle.wheeler@dupont.com

36D. Phone: 304-357-1171

36E. FAX: 304-357-1204

PLEASE CHECK ALL APPLICABLE ATTACHMENTS INCLUDED WITH THIS PERMIT APPLICATION:

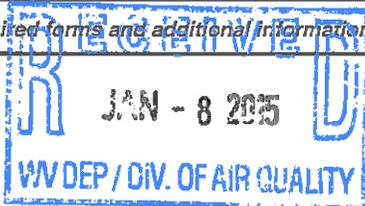
- | | |
|--|--|
| <input checked="" type="checkbox"/> Attachment A: Business Certificate | <input checked="" type="checkbox"/> Attachment K: Fugitive Emissions Data Summary Sheet |
| <input type="checkbox"/> Attachment B: Map(s) | <input checked="" type="checkbox"/> Attachment L: Emissions Unit Data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

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

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

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

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



Attachment A

Business Registration Certificates

At the time of this submittal, the Belle Plant is owned and operated by DuPont.

The current plan is for the Belle Plant to be owned and operated by the Chemours Company FC, LLC, a wholly owned subsidiary of DuPont beginning February 1, 2015.

DuPont plans to spin off Chemours as a separate company July 1, 2015.

Both Business Registration Certificates are included in this submittal.

**WEST VIRGINIA
STATE TAX DEPARTMENT
BUSINESS REGISTRATION
CERTIFICATE**

ISSUED TO:
**THE CHEMOURS COMPANY FC, LLC
8480 DUPONT RD
WASHINGTON, WV 26181-8398**

BUSINESS REGISTRATION ACCOUNT NUMBER: 2303-3963

This certificate is issued on: **10/27/2014**

*This certificate is issued by
the West Virginia State Tax Commissioner
in accordance with Chapter 11, Article 12, of the West Virginia Code.*

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

This certificate is not transferrable and must be displayed at the location for which issued
This certificate shall be permanent until cessation of the business for which the certificate of registration
was granted or until it is suspended, revoked or cancelled by the Tax Commissioner.

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

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



STATE OF WEST VIRGINIA
State Tax Department, Revenue Division
P. O. Box 2666
Charleston, WV 25330-2666



Earl Ray Tomblin, Governor

Mark W. Matkovich, Tax Commissioner

THE CHEMOURS COMPANY FC, LLC
1007 MARKET ST # D-13039
WILMINGTON DE 19898-1100

Letter Id: L1658939968
Issued: 10/27/2014
Account #: 2303-3963



RE: Business Registration Certificate

The West Virginia State Tax Department would like to thank you for registering your business. Enclosed is your Business Registration Certificate. This certificate shall be permanent until cessation of business or until suspended, revoked or cancelled. Changes in name, ownership or location are considered a cessation of business; a new Business Registration Certificate and applicable fees are required. Please review the certificate for accuracy.

This certificate must be prominently displayed at the location for which issued. Engaging in business without conspicuously posting a West Virginia Business Registration Certificate in the place of business is a crime and may subject you to fines per W.Va. Code § 11-9.

When contacting the State Tax Department, refer to the appropriate account number listed on the back of this page. The taxes listed may not be all the taxes for which you are responsible. Account numbers for taxes are printed on the tax returns mailed by the State Tax Department. Failure to timely file tax returns may result in penalties for late filing.

Should the nature of your business activity or business ownership change, your liability for these and other taxes will change accordingly.

To learn more about these taxes and the services offered by the West Virginia State Tax Department, visit our web site at www.wvtax.gov.

Enclosure

atL006 v.4

Save a stamp and your time. You can now view, file and pay taxes at <https://mytaxes.wvtax.gov>
More taxes will be available for online access in the future.

<u>TAX</u>	<u>FILING FREQUENCY</u>	<u>ACCOUNT NUMBER</u>
Business Registration Tax		2303-3963
Combined Sales & Use Tax	Combined Sales & Use Monthly	2306-6997
Pass Through Entity Tax	Partnership Annual	2303-3964
Withholding Tax	Withholding Quarterly	2306-5525

**WEST VIRGINIA
STATE TAX DEPARTMENT
BUSINESS REGISTRATION
CERTIFICATE**

ISSUED TO:
**E I DUPONT DE NEMOURS & COMPANY INC
1007 MARKET ST RM D 13039
WILMINGTON, DE 19898-0001**

BUSINESS REGISTRATION ACCOUNT NUMBER: 1030-4751

This certificate is issued on: 06/24/2011

*This certificate is issued by
the West Virginia State Tax Commissioner
in accordance with Chapter 11, Article 12, of the West Virginia Code*

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

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

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

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

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

Attachment D
Regulatory Discussion

Attachment D Regulatory Discussion

Belle Plant R13 Permit Application for Amines Tanks

December 2014

Four new storage tanks (S-112, S-113, S-102, S-110) have been constructed to replace four tanks that have either been taken out of service (S-2, S-10) or are near the end of their useful life (S-12, S-13).

The new storage tanks are nominally 51,000 gallons and are in the same service as the tanks they are replacing.

All four new tanks, like all four old tanks, are subject to the HON MACT Standard. Per 63.110(b), these tanks are not required to comply with Subpart Kb because they are subject to the HON MACT.

Two of the tanks (S-112, S-102) are in methanol service and are Group 1 Storage Vessels under the HON MACT, Subpart G. As such, these tanks require vent treatment. They are vented to a flare through a closed vent system.

Two of the tanks (S-113, S-110) are in dimethylformamide (DMF) service. DMF is a low volatility HAP so these tanks are Group 2 Storage Vessels under the HON MACT, Subpart G.

The new tanks will have the same through put and emissions as the tanks they are replacing.

The existing tanks are included in the site's current Title V Permit R30-03900001-2011 as emission units AM92, DMF29, DMF32, DMF37 and were constructed in the mid 1930's.

There is not an existing R13 permit for the Amines/Amides process unit.

The newly constructed tanks are subject to Consent Order Number CO-R13-2014-30.

Attachment O

Monitoring, Recordkeeping, Reporting

S112 Tank (AM82) – See Section 4.0 of current Title V permit (R30-03900001-2011)

S113 (DMF29), S102 (DMF32) and S110 (DMF37) – Section Section 5.0 of current Title V permit (R30-03900001-2011)

Attachment E
Plot Plan

**"REDACTED COPY
CLAIM OF CONFIDENTIALITY"**

④	④	④
DUPONT BELLE PLANT PLOT PLAN		
TITLE Y OPERATING PERMIT APPLICATION		
DRAWN BY	D.S.E.Z.P.	DANZIGER,
CHECKED BY	D.S.E.Z.P.	DANZIGER,
APPROVED BY	W.M.	DANZIGER,
SCALE	1" = 40'	
BELLE PLANT A-2566		
LATEST REVISION DATE 3/17/52, B.F.P.P.		
REFERENCE MAP 18-34 7-0110 - 178-02		

**"REDACTED COPY
CLAIM OF CONFIDENTIALITY"**

No. Tank Farm - Bldg 40 - Tank layout



Attachment F
Flow Diagrams

Attachment F Flow Diagram – Amines Area Storage Tanks
Construction Permit Application

**“REDACTED COPY
CLAIM OF CONFIDENTIALITY”**

Attachment F Flow Diagram – Amines Area Storage Tanks
Existing Tanks



**"REDACTED COPY
CLAIM OF CONFIDENTIALITY"**

Attachment G
Process Description

DMF and MMF Process Description

**"REDACTED COPY
CLAIM OF CONFIDENTIALITY"**

Attachment H

Safety Data Sheets: DMF, Methanol

***N,N-Dimethylformamide***

Version 2.0

Revision Date 06/24/2014

Ref. 130000000031

This SDS adheres to the standards and regulatory requirements of the United States and may not meet the regulatory requirements in other countries.

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : N,N-Dimethylformamide
Tradename/Synonym : DMF

Product Use : Solvent

Restrictions on use : For industrial use only.

Manufacturer/Supplier : DuPont
1007 Market Street
Wilmington, DE 19898

Product Information : 1-800-441-7515 (outside the U.S. 1-302-774-1000)
Medical Emergency : 1-800-441-3637 (outside the U.S. 1-302-774-1139)
Transport Emergency : CHEMTREC: +1-800-424-9300 (outside the U.S. +1-703-527-3887)

SECTION 2. HAZARDS IDENTIFICATION**Product hazard category**

Flammable liquids	Category 3
Acute toxicity (Inhalation)	Category 3
Acute toxicity (Dermal)	Category 4
Serious eye damage/eye irritation	Category 2A
Reproductive toxicity	Category 1B
Specific target organ toxicity - repeated exposure	Category 2

N,N-Dimethylformamide

Version 2.0

Revision Date 06/24/2014

Ref. 130000000031

Label content
Pictogram



Signal word : Danger

Hazardous warnings : Flammable liquid and vapour.
Harmful in contact with skin.
Causes serious eye irritation.
Toxic if inhaled.
May damage fertility or the unborn child.
May cause damage to organs through prolonged or repeated exposure. (Liver)



N,N-Dimethylformamide

Version 2.0

Revision Date 06/24/2014

Ref. 130000000031

Hazardous prevention measures

: Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Keep container tightly closed.
Ground/bond container and receiving equipment.
Use explosion-proof electrical/ ventilating/ lighting/ equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
Wash skin thoroughly after handling.
Use only outdoors or in a well-ventilated area.
Wear protective gloves/ eye protection/ face protection.
Use personal protective equipment as required.
IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing.
Rinse skin with water/ shower.
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
IF exposed or concerned: Get medical advice/ attention.
Call a POISON CENTER or doctor/ physician.
If eye irritation persists: Get medical advice/ attention.
Wash contaminated clothing before reuse.
In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.
Store in a well-ventilated place. Keep container tightly closed.
Store in a well-ventilated place. Keep cool.
Store locked up.
Dispose of contents/ container to an approved waste disposal plant.

Other hazards
No applicable data available.

***N,N-Dimethylformamide***

Version 2.0

Revision Date 06/24/2014

Ref. 130000000031

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS-No.	Concentration
N,N-Dimethylformamide	68-12-2	100 %

SECTION 4. FIRST AID MEASURES

- General advice : Never give anything by mouth to an unconscious person.
- Inhalation : Move to fresh air. Oxygen or artificial respiration if needed. Call a physician immediately.
- Skin contact : Wash off immediately with plenty of water for at least 15 minutes. Take off contaminated clothing and shoes immediately.
- Eye contact : Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Keep eye wide open while rinsing. Remove contact lenses.
- Ingestion : Rinse mouth. Immediately give plenty of water (if possible charcoal slurry). Do NOT induce vomiting. Consult a physician if necessary.
- Most important symptoms/effects, acute and delayed : Eye contact may provoke the following symptoms: Pain, tearing, swelling, redness, or temporary visual impairment.
Skin contact may provoke the following symptoms: Discomfort, itching, redness, or swelling.
- Protection of first-aiders : If potential for exposure exists refer to Section 8 for specific personal protective equipment.
- Notes to physician : Note: To prepare activated charcoal slurry, mix thoroughly 50 g of activated charcoal in 400 ml (about 2 cups) water.

***N,N-Dimethylformamide***

Version 2.0

Revision Date 06/24/2014

Ref. 130000000031

SECTION 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Dry powder, Foam, Carbon dioxide (CO₂)
Keep containers and surroundings cool with water spray.
- Unsuitable extinguishing media : No applicable data available.
- Specific hazards : Vapours may form explosive mixtures with air. Pressure build-up.
- Special protective equipment for firefighters : Wear self-contained breathing apparatus and protective suit. Decontaminate all equipment used in fire fighting efforts before returning to service.
- Further information : Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Cool containers / tanks with water spray.

SECTION 6. ACCIDENTAL RELEASE MEASURES

NOTE: Review FIRE FIGHTING MEASURES and HANDLING (PERSONNEL) sections before proceeding with clean-up. Use appropriate PERSONAL PROTECTIVE EQUIPMENT during clean-up.

- Safeguards (Personnel) : Ensure adequate ventilation. Remove all sources of ignition. Wear personal protective equipment. Evacuate personnel to safe areas.
- Environmental precautions : Prevent product from entering drains. Do not contaminate surface water.
- Spill Cleanup : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Transfer to steel drums with a lid. Use mechanical handling equipment. After cleaning, flush away traces with water.
- Accidental Release Measures : No applicable data available.

SECTION 7. HANDLING AND STORAGE



N,N-Dimethylformamide

Version 2.0

Revision Date 06/24/2014

Ref. 130000000031

- Handling (Personnel) : Use only in area provided with appropriate exhaust ventilation. Do not use sparking tools. Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres. Avoid contact with skin and eyes. Do not breathe vapours or spray mist. Avoid formation of aerosol.
General industrial hygiene practice. Wash hands before breaks and immediately after handling the product. Wash contaminated clothing before re-use. Discard contaminated shoes.
- Handling (Physical Aspects) : Keep away from heat and sources of ignition.
Take measures to prevent the build up of electrostatic charge.
- Dust explosion class : No applicable data available.
- Storage : Keep containers tightly closed in a dry, cool and well-ventilated place.
Containers which are opened must be carefully resealed and kept upright to prevent leakage.
Keep away from: Polyhalogenated compounds Inorganic acid chlorides
Oxidizing agents
- Storage period : No applicable data available.
- Storage temperature : < 54.4 °C (< 129.9 °F)

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

- Engineering controls : Ensure adequate ventilation. Maintain walking and working surfaces free of liquid product. Local exhaust system is recommended for high temperature processing and open resin handling system.
- Personal protective equipment

 - Respiratory protection : When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. In case of mist, spray or aerosol exposure wear suitable personal respiratory protection and protective suit.
 - Hand protection : Additional protection: Solvent-resistant gloves (butyl-rubber), Neoprene gloves
 - Hand protection : Additional protection: Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time.
 - Eye protection : Tightly fitting safety goggles

Safety Data Sheet



N,N-Dimethylformamide

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Skin and body protection : Where there is potential for skin contact, have available and wear as appropriate, impervious gloves, apron, pants, jacket, hood and boots.

Exposure Guidelines Exposure Limit Values

N,N-Dimethylformamide Permissible exposure limit:	(OSHA)	10 ppm	30 mg/m3	8 hr. TWA
TLV	(ACGIH)	10 ppm	TWA	
AEL *	(DUPONT)	10 ppm	8 & 12 hr. TWA, Skin	

Remarks Biological Exposure Index (BEI) 20 ppm of MMF in an end-of-shift urine sample for several workers doing the same job and 40 ppm for an individual result.

Biological Exposure Indices

N,N-Dimethylformamide BEI	(ACGIH)	15 mg/l N-Methylformamide/Urine Sampling time: End of shift.
BEI	(ACGIH)	40 mg/l N-Acetyl-S-(N-methylcarbamoyl) cysteine/Urine Sampling time: Prior to last shift of work week.

* AEL is DuPont's Acceptable Exposure Limit. Where governmentally imposed occupational exposure limits which are lower than the AEL are in effect, such limits shall take precedence.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance (Physical state, form, colour, etc.)

Form : liquid
Color : colourless
Odor : slight, amine-like

***N,N-Dimethylformamide***

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Odor threshold	: No applicable data available.
pH	: 8 at 190 g/l
Melting point/freezing point	: -61 °C (-78 °F)
Boiling point/boiling range	: 153 °C (307 °F) at 760 mm Hg
Flash point	: 58 °C closed cup
Evaporation rate	: ca. 0.5 (Butyl Acetate=1.0)
Flammability (solid, gas)	: No applicable data available.
Upper explosion limit	: 15.2 vol%
Lower explosion limit	: 2.2 vol%
Vapor pressure	: 10.7 hPa at 38 °C (100 °F) : 2.6 mm Hg at 20 °C (68 °F) : 8 mm Hg at 38 °C (100 °F)
Vapor density	: 2.5 at 20 °C (68 °F)
Density	: No applicable data available.
Specific gravity (Relative density)	: 0.949 at 20 °C (68 °F)
Bulk density	: No applicable data available.
Water solubility	: soluble
Solubility(ies)	: No applicable data available.
Partition coefficient: n-octanol/water	: No applicable data available.
Auto-ignition temperature	: 445 °C Auto-flammability
Self ignition	: No applicable data available.
Decomposition temperature	: > 350 °C
Viscosity	: No applicable data available.

***N,N-Dimethylformamide***

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SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	No applicable data available.
Chemical stability	:	Stable under normal conditions. No decomposition if stored and applied as directed.
Possibility of hazardous reactions	:	No applicable data available.
Conditions to avoid	:	To avoid thermal decomposition, do not overheat.
Incompatible materials	:	Polyhalogenated compounds Inorganic acid chlorides, Oxidizing agents
Hazardous decomposition products	:	Carbon monoxide, Nitrogen oxides (NOx), formic acid , Methylamine (di-)

SECTION 11. TOXICOLOGICAL INFORMATION

N,N-Dimethylformamide	
Inhalation 4 h LC50	4.7 mg/l , mouse
Dermal LD50	1,500 mg/kg , rabbit
Oral LD50	3,010 mg/kg , rat
Skin irritation	No skin irritation, rabbit
Eye irritation	Eye irritation, rabbit
Skin sensitization	Does not cause skin sensitisation., mouse
Repeated dose toxicity	: Oral rat - Target Organs: Liver Liver damage Inhalation rat - Target Organs: Liver Liver damage



N,N-Dimethylformamide

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- Carcinogenicity** : Not classifiable as a human carcinogen.
Animal testing did not show any carcinogenic effects.
- Mutagenicity** : Animal testing did not show any mutagenic effects.
Tests on mammalian cell cultures showed mutagenic effects.
- Reproductive toxicity** : Presumed human reproductive toxicant
Animal testing showed effects on reproduction at levels below those causing parental toxicity that included:
Reduced fertility
Reduced embryo-foetal viability
- Teratogenicity** : Animal testing showed effects on embryo-foetal development at levels below those causing maternal toxicity.
Animal testing showed effects on embryo-foetal development including:
Foetal malformations

Carcinogenicity
None of the components present in this material at concentrations equal to or greater than 0.1% are listed by IARC, NTP, or OSHA, as a carcinogen.

SECTION 12. ECOLOGICAL INFORMATION

Aquatic Toxicity

N,N-Dimethylformamide

- 96 h LC50 : Lepomis macrochirus (Bluegill sunfish) 7,100 mg/l
- 72 h ErC50 : Desmodesmus subspicatus (green algae) > 1,000 mg/l
- 72 h NOEC : Pseudokirchneriella subcapitata (green algae) 940 mg/l
- 48 h EC50 : Daphnia magna (Water flea) 13,100 mg/l OECD Test Guideline 202
- 21 d : NOEC Daphnia magna (Water flea) 1,500 mg/l

Environmental Fate

N,N-Dimethylformamide

Safety Data Sheet



N,N-Dimethylformamide

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Biodegradability : no data available

N,N-Dimethylformamide
Bioaccumulation : Cyprinus carpio (Carp) OECD Test Guideline 305C
Bioconcentration factor (BCF) : 0.3 - 1.2
Bioaccumulation is unlikely.

SECTION 13. DISPOSAL CONSIDERATIONS

Waste disposal methods - Product : In accordance with local and national regulations.
Waste disposal methods - Container : Triple rinse (or equivalent) empty 55 gallon or 208 liters drums before disposal or reuse.
Contaminated packaging : No applicable data available.

SECTION 14. TRANSPORT INFORMATION

DOT UN number : 2265
Proper shipping name : N,N-Dimethylformamide
Class : 3
Packing group : III
Labelling No. : 3
Reportable Quantity : 100 lbs Dimethylformamide
IATA_C UN number : 2265
Proper shipping name : N,N-Dimethylformamide
Class : 3
Packing group : III
Labelling No. : 3
IMDG UN number : 2265
Proper shipping name : N,N-DIMETHYLFORMAMIDE
Class : 3
Packing group : III
Labelling No. : 3

***N,N-Dimethylformamide***

Version 2.0

Revision Date 06/24/2014

Ref. 13000000031

SECTION 15. REGULATORY INFORMATION

TSCA	: Listed
SARA 313 Regulated Chemical(s)	: N,N-Dimethylformamide
PA Right to Know Regulated Chemical(s)	: Substances on the Pennsylvania Hazardous Substances List present at a concentration of 1% or more (0.01% for Special Hazardous Substances): N,N-Dimethylformamide
NJ Right to Know Regulated Chemical(s)	: Substances on the New Jersey Workplace Hazardous Substance List present at a concentration of 1% or more (0.1% for substances identified as carcinogens, mutagens or teratogens): N,N-Dimethylformamide
Title III hazard classification	: Acute Health Hazard: Yes Chronic Health Hazard: Yes Fire: Yes Reactivity/Physical hazard: No Pressure: No
CERCLA Reportable Quantity	: 100 lbs Based on the percentage composition of this chemical in the product.: N,N-Dimethylformamide
California Prop. 65	: WARNING! This product contains a chemical known to the State of California to cause birth defects or other reproductive harm. N,N-Dimethylacetamide

SECTION 16. OTHER INFORMATION

The DuPont Oval Logo is a registered trademark of E.I. du Pont de Nemours and Company.

Revision Date : 06/24/2014

Contact person : MSDS Coordinator, DuPont Chemicals and Fluoroproducts, Wilmington, DE 19898, (800) 441-7515



N,N-Dimethylformamide

Version 2.0

Revision Date 06/24/2014

Ref. 130000000031

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

Significant change from previous version is denoted with a double bar.



Methanol

Version 2.0

Revision Date 09/01/2009

Ref. 130000052482

This SDS adheres to the standards and regulatory requirements of the United States and may not meet the regulatory requirements in other countries.

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Methanol
 MSDS Number : 130000052482
 Manufacturer : DuPont
 1007 Market Street
 Wilmington, DE 19898

Product Information : 1-800-441-7515 (outside the U.S. 1-302-774-1000)
 Medical Emergency : 1-800-441-3637 (outside the U.S. 1-302-774-1139)
 Transport Emergency : CHEMTREC: 1-800-424-9300 (outside the U.S. 1-703-527-3887)

SECTION 2. HAZARDS IDENTIFICATION

Potential Health Effects

Skin

Methanol : May irritate skin.
 May cause: Temporary, Blurred vision.
 May cause: Blindness

Eyes

Methanol : Causes eye irritation.

Inhalation

Methanol : May cause respiratory tract irritation.
 May cause: Temporary, Blurred vision.
 May cause: Blindness

Ingestion

Methanol : May cause: Gastrointestinal discomfort, Nausea, Vomiting, Diarrhoea,
 Central nervous system depression, Liver effects.
 May cause: Temporary, Blurred vision.
 May cause: Blindness

Repeated exposure

Methanol : Blindness
 Liver effects
 Central nervous system effects
 nerve damage
 Kidney effects
 May cause harm to the unborn child.

Target Organs

Methanol : Eyes
 Liver
 Nervous system
 Kidney

Material Safety Data Sheet



Methanol

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Ref. 130000052482

Carcinogenicity

None of the components present in this material at concentrations equal to or greater than 0.1% are listed by IARC, NTP, or OSHA, as a carcinogen.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS-No.	Concentration
Methanol	67-56-1	99.85 - 100 %

SECTION 4. FIRST AID MEASURES

- Skin contact** : Wash off immediately with plenty of water. Remove contaminated clothing and shoes. Call a physician.
- Eye contact** : Rinse immediately with plenty of water and seek medical advice.
- Inhalation** : If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.
- Ingestion** : Induce vomiting, but only if victim is fully conscious. Call a physician.
- Notes to physician** : Provide methanol ingestion treatment to block the enzyme alcohol dehydrogenase. Treatment may consist of Antizol (fomepizole) injection or a 5% - 10% ethanol solution given intravenously, titrated to a recommended target serum concentration of 100 - 150 mg/dL (0.1% to 0.15%).

SECTION 5. FIRE-FIGHTING MEASURES

- Flammable Properties**
- Flash point** : 11 °C (52 °F)
Method : Tag closed cup - TCC
- Autoignition temperature** : 385 °C (725 °F)
- Lower explosion limit** : 6 vol%
- Upper explosion limit** : 36 vol%
- Fire and Explosion Hazard** : Closed containers exposed to extreme heat can rupture due to pressure build-up. Vapours or gases may travel considerable distances to ignition source and flash back. Methanol-water mixtures will burn unless very dilute.
- Suitable extinguishing media** : Water spray, Dry chemical, Carbon dioxide (CO₂), Alcohol-Type Aqueous Film-forming Foam (AFFF)

Material Safety Data Sheet



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Firefighting Instructions : Wear chemical resistant suit with hood and self-contained breathing apparatus. Firefighters' protective clothing provides no chemical resistance to the product. Evacuate personnel and keep upwind of fire. Cool containers / tanks with water spray. Burns with colourless flame.

SECTION 6. ACCIDENTAL RELEASE MEASURES

NOTE: Review FIRE FIGHTING MEASURES and HANDLING (PERSONNEL) sections before proceeding with clean-up. Use appropriate PERSONAL PROTECTIVE EQUIPMENT during clean-up.

Spill Cleanup : Dike spill. Flush with plenty of water.

Accidental Release Measures : Follow applicable Federal, State/Provincial and Local laws/regulations.

SECTION 7. HANDLING AND STORAGE

Handling (Personnel) : Avoid contact with skin, eyes and clothing. Avoid breathing vapours or mist. Wash hands thoroughly after handling.

Handling (Physical Aspects) : Keep away from open flames, hot surfaces and sources of ignition. When using do not smoke.

Storage : Keep away from heat, sparks and flames. Store under nitrogen. Store bulk quantities under nitrogen blanket. Keep in a well-ventilated place.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Personal protective equipment

Respiratory protection : Wear a positive-pressure supplied-air respirator.

Hand protection : Additional protection: Impervious gloves

Eye protection : Wear safety glasses. Wear coverall chemical splash goggles and face shield when the possibility exists for eye and face contact due to splashing or spraying of material.

Skin and body protection : Where there is potential for skin contact, have available and wear as appropriate, impervious gloves, apron, pants, jacket, hood and boots.

Exposure Guidelines

Exposure Limit Values

Methanol

PEL (Permissible Exposure Limit)	(OSHA)	200 ppm	260 mg/m ³	8 hr. TWA
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TLV	(ACGIH)	250 ppm	STEL	
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TLV	(ACGIH)	200 ppm	TWA	
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AEL *	(DUPONT)	200 ppm	8 & 12 hr. TWA, Skin	
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**Methanol**

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Ref. 130000052482

* AEL is DuPont's Acceptable Exposure Limit. Where governmentally imposed occupational exposure limits which are lower than the AEL are in effect, such limits shall take precedence.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Form	: liquid
Color	: colourless
Odor	: slight, alcoholic
pH	: neutral
Freezing point	: -97.7 °C (-143.9 °F)
Boiling point/boiling range	: 64.5 °C (148.1 °F)
% Volatile	: 100 %
Density	: ca. 1.1 g/cm ³
Specific Gravity	: 0.8 at 20 °C (68 °F)
Evaporation rate	: 4.6 (Butyl Acetate=1.0)

SECTION 10. STABILITY AND REACTIVITY

Stability	: Stable
Incompatibility	: strong oxidizers Strong acids Strong bases chlorates, perchlorates sulfuric acid magnesium plastics rubber Aluminum Lead

SECTION 11. TOXICOLOGICAL INFORMATION

Methanol	
Dermal LD50	: 15,840 mg/kg, rabbit
Oral LD50	: 5,628 mg/kg, rat
Oral LD50	: 870 mg/kg, mouse
Oral	: animals (unspecified species) narcosis Liver effects
Inhalation 1 h LC50	: 190 mg/l, rat
Inhalation 4 h LC50	: 47.5 mg/l, rat
Skin irritation	: Species: rabbit, Mild skin irritation
Eye irritation	: Species: rabbit, Eye irritation

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Skin sensitization	: Species: guinea pig Not a skin sensitizer.
Repeated dose toxicity	: Dermal, multiple species mortality Oral, Monkey Blindness
Mutagenicity	: Tests on bacterial or mammalian cell cultures did not show mutagenic effects.
Teratogenicity	: Animal testing showed effects on embryo-foetal development at levels below those causing maternal toxicity., Foetal malformations, Delayed foetal development (variations), Reduced growth

SECTION 12. ECOLOGICAL INFORMATION

Aquatic Toxicity

Methanol

96 h LC50	: Fathead minnow 28,100 mg/l
48 h EC50	: Daphnia > 10,000 mg/l

SECTION 13. DISPOSAL CONSIDERATIONS

Waste Disposal	: Treatment, storage, transportation, and disposal must be in accordance with applicable federal, state/provincial, and local regulations.
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SECTION 14. TRANSPORT INFORMATION

DOT	UN-Number	: 1230
	Proper shipping name	: Methanol
	Class	: 3
	Packaging group	: II
	Labelling No.	: 3 (6.1)
IATA_C	Reportable Quantity	: 5,000 lbs (Methanol)
	UN-Number	: 1230
	Proper shipping name	: Methanol
	Class	: 3
	Packaging group	: II
IMDG	Labelling No.	: 3
	UN-Number	: 1230
	Proper shipping name	: Methanol
	Class	: 3
	Packaging group	: II

**Methanol**

Version 2.0

Revision Date 09/01/2009

Ref. 13000052482

Labelling No. : 3 (6.1)

SECTION 15. REGULATORY INFORMATION

SARA 313 Regulated Chemical(s) : Methanol

CERCLA Reportable Quantity : 5,005 lbs
Based on the percentage composition of this chemical in the product.:
MethanolCalifornia Prop. 65 : WARNING! This product contains a chemical known to the State of California to cause cancer.
EthanolWARNING! This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.
EthanolPA Right to Know Regulated Chemical(s) : Substances on the Pennsylvania Hazardous Substances List present at a concentration of 1% or more (0.01% for Special Hazardous Substances):
Methanol

NJ Right to Know Regulated Chemical(s) : Substances on the New Jersey Workplace Hazardous Substance List present at a concentration of 1% or more (0.1% for substances identified as carcinogens, mutagens or teratogens): Methanol

SECTION 16. OTHER INFORMATION

MSDS preparation date : 09/01/2009

The DuPont Oval Logo is a registered trademark of E.I. du Pont de Nemours and Company.

Contact person : MSDS Coordinator, DuPont Chemical Solutions Enterprise, Wilmington, DE 19898, (800) 441-7515

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Significant change from previous version is denoted with a double bar.



Methanol

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Ref. 130000052482

Attachment I

Emission Units Table

Attachment J

EMISSION POINTS DATA SUMMARY SHEET

**Attachment J
EMISSION POINTS DATA SUMMARY SHEET**

Table 1: Emissions Data

Emission Point ID No. (Must match Emission Units Table & Plot Plan)	Emission Point Type ¹	Emission Unit Vented Through This Point (Must match Emission Units Table & Plot Plan)		Air Pollution Control Device (Must match Emission Units Table & Plot Plan)		Vent Time for Emission Unit (chemical processes only)		All Regulated Pollutants - Chemical Name/CAS ³ (Speciate VOCs & HAPS)	Maximum Potential Uncontrolled Emissions ⁴		Maximum Potential Controlled Emissions ⁵		Emission Form or Phase (At exit conditions, Solid, Liquid or Gas/Vapor)	Est. Method Used ⁶	Emission Concentration ⁷ (ppmv or mg/m ³)
		ID No.	Source	ID No.	Device Type	Short Term ²	Max (hr/yr)		lb/hr	ton/yr	lb/hr	ton/yr			
AM82	Vertical	402.001		AMCD01	Flare	C	8760	Methanol	0.3	1.3	0.01	0.03	Vapor	Tanks4	
	Flare														
DMF29	Cons			None		C	8760	Dimethylformamide Methanol	0.02	0.1	0.02	0.1	Vapor	Tanks4	
	Vent										0.1	0.4			
DMF32	Vertical	402.001		AMCD01	Flare	C	8760	Methanol	0.4	1.8	0.008	0.04	Vapor	Tanks4	
	Flare														
DMF37	Cons			None		C	8760	Dimethylformamide	0.2	0.9	0.2	0.9	Vapor	Tanks4	
	Vent														

The EMISSION POINTS DATA SUMMARY SHEET provides a summation of emissions by emission unit. Note that uncaptured process emission unit emissions are not typically considered to be fugitive and must be accounted for on the appropriate EMISSIONS UNIT DATA SHEET and on the EMISSION POINTS DATA SUMMARY SHEET. Please note that total emissions from the source are equal to all vented emissions, all fugitive emissions, plus all other emissions (e.g. uncaptured emissions). Please complete the FUGITIVE EMISSIONS DATA SUMMARY SHEET for fugitive emission activities.

¹ Please add descriptors such as upward vertical stack, downward vertical stack, horizontal stack, relief vent, rain cap, etc.

² Indicate by "C" if venting is continuous. Otherwise, specify the average short-term venting rate with units, for intermittent venting (i.e., 15 min/hr). Indicate as many rates as needed to clarify frequency of venting (e.g., 5 min/day, 2 days/wk).

³ List all regulated air pollutants. Speciate VOCs, including all HAPs. Follow chemical name with Chemical Abstracts Service (CAS) number. LIST Acids, CO, CS₂, VOCs, H₂S, Inorganics, Lead, Organics, O₃, NO, NO₂, SO₂, SO₃, all applicable Greenhouse Gases (including CO₂ and methane), etc. DO NOT LIST H₂, H₂O, N₂, O₂, and Noble Gases.

⁴ Give maximum potential emission rate with no control equipment operating. If emissions occur for less than 1 hr, then record emissions per batch in minutes (e.g. 5 lb VOC/20 minute batch).

⁵ Give maximum potential emission rate with proposed control equipment operating. If emissions occur for less than 1 hr, then record emissions per batch in minutes (e.g. 5 lb VOC/20 minute batch).

⁶ Indicate method used to determine emission rate as follows: MB = material balance; ST = stack test (give date of test); EE = engineering estimate; O = other (specify).

⁷ Provide for all pollutant emissions. Typically, the units of parts per million by volume (ppmv) are used. If the emission is a mineral acid (sulfuric, nitric, hydrochloric or phosphoric) use units of milligram per dry cubic meter (mg/m³) at standard conditions (68 °F and 29.92 inches Hg) (see 45CSR7). If the pollutant is SO₂, use units of ppmv (See 45CSR10).

Attachment K
Fugitive Emissions Estimate

Attachment K

FUGITIVE EMISSIONS DATA SUMMARY SHEET

The FUGITIVE EMISSIONS SUMMARY SHEET provides a summation of fugitive emissions. Fugitive emissions are those emissions which could not reasonably pass through a stack, chimney, vent or other functionally equivalent opening. Note that uncaptured process emissions are not typically considered to be fugitive, and must be accounted for on the appropriate EMISSIONS UNIT DATA SHEET and on the EMISSION POINTS DATA SUMMARY SHEET.

Please note that total emissions from the source are equal to all vented emissions, all fugitive emissions, plus all other emissions (e.g. uncaptured emissions).

APPLICATION FORMS CHECKLIST - FUGITIVE EMISSIONS
1.) Will there be haul road activities? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If YES, then complete the HAUL ROAD EMISSIONS UNIT DATA SHEET.
2.) Will there be Storage Piles? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If YES, complete Table 1 of the NONMETALLIC MINERALS PROCESSING EMISSIONS UNIT DATA SHEET.
3.) Will there be Liquid Loading/Unloading Operations? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If YES, complete the BULK LIQUID TRANSFER OPERATIONS EMISSIONS UNIT DATA SHEET.
4.) Will there be emissions of air pollutants from Wastewater Treatment Evaporation? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If YES, complete the GENERAL EMISSIONS UNIT DATA SHEET.
5.) Will there be Equipment Leaks (e.g. leaks from pumps, compressors, in-line process valves, pressure relief devices, open-ended valves, sampling connections, flanges, agitators, cooling towers, etc.)? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> If YES, complete the LEAK SOURCE DATA SHEET section of the CHEMICAL PROCESSES EMISSIONS UNIT DATA SHEET.
6.) Will there be General Clean-up VOC Operations? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If YES, complete the GENERAL EMISSIONS UNIT DATA SHEET.
7.) Will there be any other activities that generate fugitive emissions? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If YES, complete the GENERAL EMISSIONS UNIT DATA SHEET or the most appropriate form.
If you answered "NO" to all of the items above, it is not necessary to complete the following table, "Fugitive Emissions Summary."

FUGITIVE EMISSIONS SUMMARY	All Regulated Pollutants Chemical Name/CAS ¹	Maximum Potential Uncontrolled Emissions ²		Maximum Potential Controlled Emissions ³		Est. Method Used ⁴
		lb/hr	ton/yr	lb/hr	ton/yr	
Haul Road/Road Dust Emissions Paved Haul Roads						
Unpaved Haul Roads						
Storage Pile Emissions						
Loading/Unloading Operations						
Wastewater Treatment Evaporation & Operations						
Equipment Leaks	Methanol 67-56-1 Dimethylformamide 68-12-2	Does not apply	0.03 0.03	Does not apply	0.03 0.03	EE
General Clean-up VOC Emissions						
Other						

¹ List all regulated air pollutants. Speciate VOCs, including all HAPs. Follow chemical name with Chemical Abstracts Service (CAS) number. LIST Acids, CO, CS₂, VOCs, H₂S, Inorganics, Lead, Organics, O₃, NO, NO₂, SO₂, SO₃, all applicable Greenhouse Gases (including CO₂ and methane), etc. DO NOT LIST H₂, H₂O, N₂, O₂, and Noble Gases.

² Give rate with no control equipment operating. If emissions occur for less than 1 hr, then record emissions per batch in minutes (e.g. 5 lb VOC/20 minute batch).

³ Give rate with proposed control equipment operating. If emissions occur for less than 1 hr, then record emissions per batch in minutes (e.g. 5 lb VOC/20 minute batch).

⁴ Indicate method used to determine emission rate as follows: MB = material balance; ST = stack test (give date of test); EE = engineering estimate; O = other (specify).

Tank	Contents	Flanges	Emission Factor, lb/hr/component	Per hr	Per yr	Ton / yr
S112	Methanol	19	0.00018	0.00342	29.9592	0.01498
S113	DMF	19	0.00018	0.00342	29.9592	0.01498
S102	Methanol	19	0.00018	0.00342	29.9592	0.01498
S110	DMF	19	0.00018	0.00342	29.9592	0.01498

Per tank drawing each tank contains the following nozzles:

- 3 @ 3"
- 3 @ 6"
- 2 @ 8"
- 6 @ 4"
- 1 @ 24"
- 3 @ 2"
- 1 @ 20"

Emission Factors per 1980s
DuPont Study

Attachment L

Emissions Unit Data Sheets

**Attachment L
EMISSIONS UNIT DATA SHEET
STORAGE TANKS**

Provide the following information for each new or modified bulk liquid storage tank as shown on the *Equipment List Form* and other parts of this application. A tank is considered modified if the material to be stored in the tank is different from the existing stored liquid.

IF USING US EPA'S TANKS EMISSION ESTIMATION PROGRAM (AVAILABLE AT www.epa.gov/tnn/tanks.html), APPLICANT MAY ATTACH THE SUMMARY SHEETS IN LIEU OF COMPLETING SECTIONS III, IV, & V OF THIS FORM. HOWEVER, SECTIONS I, II, AND VI OF THIS FORM MUST BE COMPLETED. US EPA'S AP-42, SECTION 7.1, "ORGANIC LIQUID STORAGE TANKS," MAY ALSO BE USED TO ESTIMATE VOC AND HAP EMISSIONS (<http://www.epa.gov/tnn/chiefl>).

I. GENERAL INFORMATION (required)

1. Bulk Storage Area Name Amines Tank Farm	2. Tank Name S-102 Methanol Overheads Tank
3. Tank Equipment Identification No. (as assigned on <i>Equipment List Form</i>) DMF32	4. Emission Point Identification No. (as assigned on <i>Equipment List Form</i>) 402.001 (AMCD01)
5. Date of Commencement of Construction (for existing tanks) 7/21/2014	
6. Type of change <input type="checkbox"/> New Construction <input type="checkbox"/> New Stored Material <input checked="" type="checkbox"/> Other Tank Modification	
7. Description of Tank Modification (if applicable)	
7A. Does the tank have more than one mode of operation? (e.g. Is there more than one product stored in the tank?) <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
7B. If YES, explain and identify which mode is covered by this application (Note: A separate form must be completed for each mode).	
7C. Provide any limitations on source operation affecting emissions, any work practice standards (e.g. production variation, etc.): This tank is a Group 1 Storage Tank under the HON MACT (Subpart G) subject to 40 CFR 63.119	

II. TANK INFORMATION (required)

8. Design Capacity (specify barrels or gallons). Use the internal cross-sectional area multiplied by internal height.	
9A. Tank Internal Diameter (ft)	9B. Tank Internal Height (or Length) (ft)
10A. Maximum Liquid Height (ft)	10B. Average Liquid Height (ft)
11A. Maximum Vapor Space Height (ft)	11B. Average Vapor Space Height (ft)
12. Nominal Capacity (specify barrels or gallons). This is also known as "working volume" and considers design liquid levels and overflow valve heights.	

25F. Describe deck fittings; indicate the number of each type of fitting:		
ACCESS HATCH		
BOLT COVER, GASKETED:	UNBOLTED COVER, GASKETED:	UNBOLTED COVER, UNGASKETED:
AUTOMATIC GAUGE FLOAT WELL		
BOLT COVER, GASKETED:	UNBOLTED COVER, GASKETED:	UNBOLTED COVER, UNGASKETED:
COLUMN WELL		
BUILT-UP COLUMN - SLIDING COVER, GASKETED:	BUILT-UP COLUMN - SLIDING COVER, UNGASKETED:	PIPE COLUMN - FLEXIBLE FABRIC SLEEVE SEAL:
LADDER WELL		
PIP COLUMN - SLIDING COVER, GASKETED:	PIPE COLUMN - SLIDING COVER, UNGASKETED:	
GAUGE-HATCH/SAMPLE PORT		
SLIDING COVER, GASKETED:	SLIDING COVER, UNGASKETED:	
ROOF LEG OR HANGER WELL		
WEIGHTED MECHANICAL ACTUATION, GASKETED:	WEIGHTED MECHANICAL ACTUATION, UNGASKETED:	SAMPLE WELL-SLIT FABRIC SEAL (10% OPEN AREA)
VACUUM BREAKER		
WEIGHTED MECHANICAL ACTUATION, GASKETED:	WEIGHTED MECHANICAL ACTUATION, UNGASKETED:	
RIM VENT		
WEIGHTED MECHANICAL ACTUATION GASKETED:	WEIGHTED MECHANICAL ACTUATION, UNGASKETED:	
DECK DRAIN (3-INCH DIAMETER)		
OPEN:	90% CLOSED:	
STUB DRAIN		
1-INCH DIAMETER:		
OTHER (DESCRIBE, ATTACH ADDITIONAL PAGES IF NECESSARY)		

26. Complete the following section for Internal Floating Roof Tanks <input checked="" type="checkbox"/> Does Not Apply	
26A. Deck Type: <input type="checkbox"/> Bolted <input type="checkbox"/> Welded	
26B. For Bolted decks, provide deck construction:	
26C. Deck seam:	
<input type="checkbox"/> Continuous sheet construction 5 feet wide <input type="checkbox"/> Continuous sheet construction 6 feet wide <input type="checkbox"/> Continuous sheet construction 7 feet wide <input type="checkbox"/> Continuous sheet construction 5 × 7.5 feet wide <input type="checkbox"/> Continuous sheet construction 5 × 12 feet wide <input type="checkbox"/> Other (describe)	
26D. Deck seam length (ft)	26E. Area of deck (ft ²)
For column supported tanks:	26G. Diameter of each column:
26F. Number of columns:	

IV. SITE INFORMATION (optional if providing TANKS Summary Sheets)

27. Provide the city and state on which the data in this section are based. Charleston, WV
28. Daily Average Ambient Temperature (°F)
29. Annual Average Maximum Temperature (°F)
30. Annual Average Minimum Temperature (°F)
31. Average Wind Speed (miles/hr)
32. Annual Average Solar Insulation Factor (BTU/(ft ² -day))
33. Atmospheric Pressure (psia)

V. LIQUID INFORMATION (optional if providing TANKS Summary Sheets)

34. Average daily temperature range of bulk liquid:			
34A. Minimum (°F)	34B. Maximum (°F)		
35. Average operating pressure range of tank:			
35A. Minimum (psig)	35B. Maximum (psig)		
36A. Minimum Liquid Surface Temperature (°F)	36B. Corresponding Vapor Pressure (psia)		
37A. Average Liquid Surface Temperature (°F)	37B. Corresponding Vapor Pressure (psia)		
38A. Maximum Liquid Surface Temperature (°F)	38B. Corresponding Vapor Pressure (psia)		
39. Provide the following for <u>each</u> liquid or gas to be stored in tank. Add additional pages if necessary.			
39A. Material Name or Composition			
39B. CAS Number			
39C. Liquid Density (lb/gal)			
39D. Liquid Molecular Weight (lb/lb-mole)			
39E. Vapor Molecular Weight (lb/lb-mole)			

**Attachment L
EMISSIONS UNIT DATA SHEET
STORAGE TANKS**

Provide the following information for each new or modified bulk liquid storage tank as shown on the *Equipment List Form* and other parts of this application. A tank is considered modified if the material to be stored in the tank is different from the existing stored liquid.

IF USING US EPA'S TANKS EMISSION ESTIMATION PROGRAM (AVAILABLE AT www.epa.gov/tnn/tanks.html), APPLICANT MAY ATTACH THE SUMMARY SHEETS IN LIEU OF COMPLETING SECTIONS III, IV, & V OF THIS FORM. HOWEVER, SECTIONS I, II, AND VI OF THIS FORM MUST BE COMPLETED. US EPA'S AP-42, SECTION 7.1, "ORGANIC LIQUID STORAGE TANKS," MAY ALSO BE USED TO ESTIMATE VOC AND HAP EMISSIONS (<http://www.epa.gov/tnn/chief/>).

I. GENERAL INFORMATION (required)

1. Bulk Storage Area Name Amines Tank Farm	2. Tank Name S-110 Product DMF Tank
3. Tank Equipment Identification No. (as assigned on <i>Equipment List Form</i>) DMF37	4. Emission Point Identification No. (as assigned on <i>Equipment List Form</i>)
5. Date of Commencement of Construction (for existing tanks) 7/21/2014	
6. Type of change <input type="checkbox"/> New Construction <input type="checkbox"/> New Stored Material <input checked="" type="checkbox"/> Other Tank Modification	
7. Description of Tank Modification (if applicable)	
7A. Does the tank have more than one mode of operation? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (e.g. Is there more than one product stored in the tank?)	
7B. If YES, explain and identify which mode is covered by this application (Note: A separate form must be completed for each mode).	
7C. Provide any limitations on source operation affecting emissions, any work practice standards (e.g. production variation, etc.): This tank is a Group 2 Storage Tank under the HON MACT (Subpart G) subject to 40 CFR 63.119	

II. TANK INFORMATION (required)

8. Design Capacity (specify barrels or gallons). Use the internal cross-sectional area multiplied by internal height.	
9A. Tank Internal Diameter (ft)	9B. Tank Internal Height (or Length) (ft)
10A. Maximum Liquid Height (ft) 33.6	10B. Average Liquid Height (ft)
11A. Maximum Vapor Space Height (ft)	11B. Average Vapor Space Height (ft)
12. Nominal Capacity (specify barrels or gallons). This is also known as "working volume" and considers design liquid levels and overflow valve heights.	

25F. Describe deck fittings; indicate the number of each type of fitting:		
ACCESS HATCH		
BOLT COVER, GASKETED:	UNBOLTED COVER, GASKETED:	UNBOLTED COVER, UNGASKETED:
AUTOMATIC GAUGE FLOAT WELL		
BOLT COVER, GASKETED:	UNBOLTED COVER, GASKETED:	UNBOLTED COVER, UNGASKETED:
COLUMN WELL		
BUILT-UP COLUMN – SLIDING COVER, GASKETED:	BUILT-UP COLUMN – SLIDING COVER, UNGASKETED:	PIPE COLUMN – FLEXIBLE FABRIC SLEEVE SEAL:
LADDER WELL		
PIP COLUMN – SLIDING COVER, GASKETED:	PIPE COLUMN – SLIDING COVER, UNGASKETED:	
GAUGE-HATCH/SAMPLE PORT		
SLIDING COVER, GASKETED:	SLIDING COVER, UNGASKETED:	
ROOF LEG OR HANGER WELL		
WEIGHTED MECHANICAL ACTUATION, GASKETED:	WEIGHTED MECHANICAL ACTUATION, UNGASKETED:	SAMPLE WELL-SLIT FABRIC SEAL (10% OPEN AREA)
VACUUM BREAKER		
WEIGHTED MECHANICAL ACTUATION, GASKETED:	WEIGHTED MECHANICAL ACTUATION, UNGASKETED:	
RIM VENT		
WEIGHTED MECHANICAL ACTUATION GASKETED:	WEIGHTED MECHANICAL ACTUATION, UNGASKETED:	
DECK DRAIN (3-INCH DIAMETER)		
OPEN:	90% CLOSED:	
STUB DRAIN		
1-INCH DIAMETER:		
OTHER (DESCRIBE, ATTACH ADDITIONAL PAGES IF NECESSARY)		

26. Complete the following section for Internal Floating Roof Tanks		<input checked="" type="checkbox"/> Does Not Apply
26A. Deck Type: <input type="checkbox"/> Bolted <input type="checkbox"/> Welded		
26B. For Bolted decks, provide deck construction:		
26C. Deck seam:		
<input type="checkbox"/> Continuous sheet construction 5 feet wide <input type="checkbox"/> Continuous sheet construction 6 feet wide <input type="checkbox"/> Continuous sheet construction 7 feet wide <input type="checkbox"/> Continuous sheet construction 5 × 7.5 feet wide <input type="checkbox"/> Continuous sheet construction 5 × 12 feet wide <input type="checkbox"/> Other (describe)		
26D. Deck seam length (ft)	26E. Area of deck (ft ²)	
For column supported tanks:		26G. Diameter of each column:
26F. Number of columns:		

IV. SITE INFORMATION (optional if providing TANKS Summary Sheets)

27. Provide the city and state on which the data in this section are based. Charleston, WV
28. Daily Average Ambient Temperature (°F)
29. Annual Average Maximum Temperature (°F)
30. Annual Average Minimum Temperature (°F)
31. Average Wind Speed (miles/hr)
32. Annual Average Solar Insulation Factor (BTU/(ft ² ·day))
33. Atmospheric Pressure (psia)

V. LIQUID INFORMATION (optional if providing TANKS Summary Sheets)

34. Average daily temperature range of bulk liquid:			
34A. Minimum (°F)	34B. Maximum (°F)		
35. Average operating pressure range of tank:			
35A. Minimum (psig)	35B. Maximum (psig)		
36A. Minimum Liquid Surface Temperature (°F)	36B. Corresponding Vapor Pressure (psia)		
37A. Average Liquid Surface Temperature (°F)	37B. Corresponding Vapor Pressure (psia)		
38A. Maximum Liquid Surface Temperature (°F)	38B. Corresponding Vapor Pressure (psia)		
39. Provide the following for <u>each</u> liquid or gas to be stored in tank. Add additional pages if necessary.			
39A. Material Name or Composition			
39B. CAS Number			
39C. Liquid Density (lb/gal)			
39D. Liquid Molecular Weight (lb/lb-mole)			
39E. Vapor Molecular Weight (lb/lb-mole)			

Maximum Vapor Pressure 39F. True (psia)			
39G. Reid (psia)			
Months Storage per Year 39H. From			
39I. To			

VI. EMISSIONS AND CONTROL DEVICE DATA (required)

40. Emission Control Devices (check as many as apply): Does Not Apply

- Carbon Adsorption¹
- Condenser¹
- Conservation Vent (psig)
 - Vacuum Setting 2" water column Pressure Setting 10" water column
- Emergency Relief Valve (psig)
- Inert Gas Blanket of
- Insulation of Tank with
- Liquid Absorption (scrubber)¹
- Refrigeration of Tank
- Rupture Disc (psig)
- Vent to Incinerator¹
- Other¹ (describe):

¹ Complete appropriate Air Pollution Control Device Sheet.

41. Expected Emission Rate (submit Test Data or Calculations here or elsewhere in the application).

Material Name & CAS No.	Breathing Loss (lb/hr)	Working Loss		Annual Loss (lb/yr)	Estimation Method ¹
		Amount	Units		
Dimethyl Formamide 68-12-2	1 pound	1810	pounds	1812	Tanks4

¹ EPA = EPA Emission Factor, MB = Material Balance, SS = Similar Source, ST = Similar Source Test, Throughput Data, O = Other (specify)

Remember to attach emissions calculations, including TANKS Summary Sheets if applicable.

**"REDACTED COPY
CLAIM OF CONFIDENTIALITY"**

Attachment L
**EMISSIONS UNIT DATA SHEET
STORAGE TANKS**

Provide the following information for each new or modified bulk liquid storage tank as shown on the *Equipment List Form* and other parts of this application. A tank is considered modified if the material to be stored in the tank is different from the existing stored liquid.

IF USING US EPA'S TANKS EMISSION ESTIMATION PROGRAM (AVAILABLE AT www.epa.gov/tnn/tanks.html), APPLICANT MAY ATTACH THE SUMMARY SHEETS IN LIEU OF COMPLETING SECTIONS III, IV, & V OF THIS FORM. HOWEVER, SECTIONS I, II, AND VI OF THIS FORM MUST BE COMPLETED. US EPA'S AP-42, SECTION 7.1, "ORGANIC LIQUID STORAGE TANKS," MAY ALSO BE USED TO ESTIMATE VOC AND HAP EMISSIONS (<http://www.epa.gov/tnn/chief/>).

I. GENERAL INFORMATION (required)

1. Bulk Storage Area Name Amines Tank Farm	2. Tank Name S-112 Methanol Tank
3. Tank Equipment Identification No. (as assigned on <i>Equipment List Form</i>) AM82	4. Emission Point Identification No. (as assigned on <i>Equipment List Form</i>) 402.001 (AMCD01)
5. Date of Commencement of Construction (for existing tanks) 7/21/2014	
6. Type of change <input type="checkbox"/> New Construction <input type="checkbox"/> New Stored Material <input checked="" type="checkbox"/> Other Tank Modification	
7. Description of Tank Modification (if applicable)	
7A. Does the tank have more than one mode of operation? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (e.g. Is there more than one product stored in the tank?)	
7B. If YES, explain and identify which mode is covered by this application (Note: A separate form must be completed for each mode).	
7C. Provide any limitations on source operation affecting emissions, any work practice standards (e.g. production variation, etc.): This tank is a Group 1 Storage Tank under the HON MACT (Subpart G) subject to 40 CFR 63.119.	

II. TANK INFORMATION (required)

8. Design Capacity (specify barrels or gallons). Use the internal cross-sectional area multiplied by internal height.	
9A. Tank Internal Diameter (ft)	9B. Tank Internal Height (or Length) (ft)
10A. Maximum Liquid Height (ft)	10B. Average Liquid Height (ft)
11A. Maximum Vapor Space Height (ft)	11B. Average Vapor Space Height (ft)
12. Nominal Capacity (specify barrels or gallons). This is also known as "working volume" and considers design liquid levels and overflow valve heights.	

25F. Describe deck fittings; indicate the number of each type of fitting:		
ACCESS HATCH		
BOLT COVER, GASKETED:	UNBOLTED COVER, GASKETED:	UNBOLTED COVER, UNGASKETED:
AUTOMATIC GAUGE FLOAT WELL		
BOLT COVER, GASKETED:	UNBOLTED COVER, GASKETED:	UNBOLTED COVER, UNGASKETED:
COLUMN WELL		
BUILT-UP COLUMN – SLIDING COVER, GASKETED:	BUILT-UP COLUMN – SLIDING COVER, UNGASKETED:	PIPE COLUMN – FLEXIBLE FABRIC SLEEVE SEAL:
LADDER WELL		
PIP COLUMN – SLIDING COVER, GASKETED:	PIPE COLUMN – SLIDING COVER, UNGASKETED:	
GAUGE-HATCH/SAMPLE PORT		
SLIDING COVER, GASKETED:	SLIDING COVER, UNGASKETED:	
ROOF LEG OR HANGER WELL		
WEIGHTED MECHANICAL ACTUATION, GASKETED:	WEIGHTED MECHANICAL ACTUATION, UNGASKETED:	SAMPLE WELL-SLIT FABRIC SEAL (10% OPEN AREA)
VACUUM BREAKER		
WEIGHTED MECHANICAL ACTUATION, GASKETED:	WEIGHTED MECHANICAL ACTUATION, UNGASKETED:	
RIM VENT		
WEIGHTED MECHANICAL ACTUATION GASKETED:	WEIGHTED MECHANICAL ACTUATION, UNGASKETED:	
DECK DRAIN (3-INCH DIAMETER)		
OPEN:	90% CLOSED:	
STUB DRAIN		
1-INCH DIAMETER:		
OTHER (DESCRIBE, ATTACH ADDITIONAL PAGES IF NECESSARY)		

26. Complete the following section for Internal Floating Roof Tanks <input checked="" type="checkbox"/> Does Not Apply	
26A. Deck Type: <input type="checkbox"/> Bolted <input type="checkbox"/> Welded	
26B. For Bolted decks, provide deck construction:	
26C. Deck seam:	
<input type="checkbox"/> Continuous sheet construction 5 feet wide <input type="checkbox"/> Continuous sheet construction 6 feet wide <input type="checkbox"/> Continuous sheet construction 7 feet wide <input type="checkbox"/> Continuous sheet construction 5 x 7.5 feet wide <input type="checkbox"/> Continuous sheet construction 5 x 12 feet wide <input type="checkbox"/> Other (describe)	
26D. Deck seam length (ft)	26E. Area of deck (ft ²)
For column supported tanks:	26G. Diameter of each column:
26F. Number of columns:	

IV. SITE INFORMATION (optional if providing TANKS Summary Sheets)

27. Provide the city and state on which the data in this section are based. Charleston, WV
28. Daily Average Ambient Temperature (°F)
29. Annual Average Maximum Temperature (°F)
30. Annual Average Minimum Temperature (°F)
31. Average Wind Speed (miles/hr)
32. Annual Average Solar Insulation Factor (BTU/(ft ² ·day))
33. Atmospheric Pressure (psia)

V. LIQUID INFORMATION (optional if providing TANKS Summary Sheets)

34. Average daily temperature range of bulk liquid:			
34A. Minimum (°F)	34B. Maximum (°F)		
35. Average operating pressure range of tank:			
35A. Minimum (psig)	35B. Maximum (psig)		
36A. Minimum Liquid Surface Temperature (°F)	36B. Corresponding Vapor Pressure (psia)		
37A. Average Liquid Surface Temperature (°F)	37B. Corresponding Vapor Pressure (psia)		
38A. Maximum Liquid Surface Temperature (°F)	38B. Corresponding Vapor Pressure (psia)		
39. Provide the following for <u>each</u> liquid or gas to be stored in tank. Add additional pages if necessary.			
39A. Material Name or Composition			
39B. CAS Number			
39C. Liquid Density (lb/gal)			
39D. Liquid Molecular Weight (lb/lb-mole)			
39E. Vapor Molecular Weight (lb/lb-mole)			

**Attachment L
EMISSIONS UNIT DATA SHEET
STORAGE TANKS**

Provide the following information for each new or modified bulk liquid storage tank as shown on the *Equipment List Form* and other parts of this application. A tank is considered modified if the material to be stored in the tank is different from the existing stored liquid.

IF USING US EPA'S TANKS EMISSION ESTIMATION PROGRAM (AVAILABLE AT www.epa.gov/tnn/tanks.html), APPLICANT MAY ATTACH THE SUMMARY SHEETS IN LIEU OF COMPLETING SECTIONS III, IV, & V OF THIS FORM. HOWEVER, SECTIONS I, II, AND VI OF THIS FORM MUST BE COMPLETED. US EPA'S AP-42, SECTION 7.1, "ORGANIC LIQUID STORAGE TANKS," MAY ALSO BE USED TO ESTIMATE VOC AND HAP EMISSIONS (<http://www.epa.gov/tnn/chief/>).

I. GENERAL INFORMATION (required)

1. Bulk Storage Area Name Amines Tank Farm	2. Tank Name S-113 Off-spec DMF Tank
3. Tank Equipment Identification No. (as assigned on <i>Equipment List Form</i>) DMF29	4. Emission Point Identification No. (as assigned on <i>Equipment List Form</i>)
5. Date of Commencement of Construction (for existing tanks) 7/21/2014	
6. Type of change <input type="checkbox"/> New Construction <input type="checkbox"/> New Stored Material <input checked="" type="checkbox"/> Other Tank Modification	
7. Description of Tank Modification (if applicable)	
7A. Does the tank have more than one mode of operation? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (e.g. Is there more than one product stored in the tank?)	
7B. If YES, explain and identify which mode is covered by this application (Note: A separate form must be completed for each mode).	
7C. Provide any limitations on source operation affecting emissions, any work practice standards (e.g. production variation, etc.): This tank is a Group 2 Storage Tank under the HON MACT (Subpart G) subject to 40 CFR 63.119	

II. TANK INFORMATION (required)

8. Design Capacity (specify barrels or gallons). Use the internal cross-sectional area multiplied by internal height.	
9A. Tank Internal Diameter (ft)	9B. Tank Internal Height (or Length) (ft)
10A. Maximum Liquid Height (ft)	10B. Average Liquid Height (ft)
11A. Maximum Vapor Space Height (ft)	11B. Average Vapor Space Height (ft)
12. Nominal Capacity (specify barrels or gallons). This is also known as "working volume" and considers design liquid levels and overflow valve heights.	

25F. Describe deck fittings; indicate the number of each type of fitting:		
ACCESS HATCH		
BOLT COVER, GASKETED:	UNBOLTED COVER, GASKETED:	UNBOLTED COVER, UNGASKETED:
AUTOMATIC GAUGE FLOAT WELL		
BOLT COVER, GASKETED:	UNBOLTED COVER, GASKETED:	UNBOLTED COVER, UNGASKETED:
COLUMN WELL		
BUILT-UP COLUMN – SLIDING COVER, GASKETED:	BUILT-UP COLUMN – SLIDING COVER, UNGASKETED:	PIPE COLUMN – FLEXIBLE FABRIC SLEEVE SEAL:
LADDER WELL		
PIP COLUMN – SLIDING COVER, GASKETED:	PIPE COLUMN – SLIDING COVER, UNGASKETED:	
GAUGE-HATCH/SAMPLE PORT		
SLIDING COVER, GASKETED:	SLIDING COVER, UNGASKETED:	
ROOF LEG OR HANGER WELL		
WEIGHTED MECHANICAL ACTUATION, GASKETED:	WEIGHTED MECHANICAL ACTUATION, UNGASKETED:	SAMPLE WELL-SLIT FABRIC SEAL (10% OPEN AREA)
VACUUM BREAKER		
WEIGHTED MECHANICAL ACTUATION, GASKETED:	WEIGHTED MECHANICAL ACTUATION, UNGASKETED:	
RIM VENT		
WEIGHTED MECHANICAL ACTUATION GASKETED:	WEIGHTED MECHANICAL ACTUATION, UNGASKETED:	
DECK DRAIN (3-INCH DIAMETER)		
OPEN:	90% CLOSED:	
STUB DRAIN		
1-INCH DIAMETER:		
OTHER (DESCRIBE, ATTACH ADDITIONAL PAGES IF NECESSARY)		

26. Complete the following section for Internal Floating Roof Tanks		<input checked="" type="checkbox"/> Does Not Apply
26A. Deck Type: <input type="checkbox"/> Bolted <input type="checkbox"/> Welded		
26B. For Bolted decks, provide deck construction:		
26C. Deck seam:		
<input type="checkbox"/> Continuous sheet construction 5 feet wide		
<input type="checkbox"/> Continuous sheet construction 6 feet wide		
<input type="checkbox"/> Continuous sheet construction 7 feet wide		
<input type="checkbox"/> Continuous sheet construction 5 x 7.5 feet wide		
<input type="checkbox"/> Continuous sheet construction 5 x 12 feet wide		
<input type="checkbox"/> Other (describe)		
26D. Deck seam length (ft)	26E. Area of deck (ft ²)	
For column supported tanks:		26G. Diameter of each column:
26F. Number of columns:		

IV. SITE INFORMATION (optional if providing TANKS Summary Sheets)

27. Provide the city and state on which the data in this section are based. Charleston, WV
28. Daily Average Ambient Temperature (°F)
29. Annual Average Maximum Temperature (°F)
30. Annual Average Minimum Temperature (°F)
31. Average Wind Speed (miles/hr)
32. Annual Average Solar Insulation Factor (BTU/(ft ² ·day))
33. Atmospheric Pressure (psia)

V. LIQUID INFORMATION (optional if providing TANKS Summary Sheets)

34. Average daily temperature range of bulk liquid:			
34A. Minimum (°F)	34B. Maximum (°F)		
35. Average operating pressure range of tank:			
35A. Minimum (psig)	35B. Maximum (psig)		
36A. Minimum Liquid Surface Temperature (°F)	36B. Corresponding Vapor Pressure (psia)		
37A. Average Liquid Surface Temperature (°F)	37B. Corresponding Vapor Pressure (psia)		
38A. Maximum Liquid Surface Temperature (°F)	38B. Corresponding Vapor Pressure (psia)		
39. Provide the following for <u>each</u> liquid or gas to be stored in tank. Add additional pages if necessary.			
39A. Material Name or Composition			
39B. CAS Number			
39C. Liquid Density (lb/gal)			
39D. Liquid Molecular Weight (lb/lb-mole)			
39E. Vapor Molecular Weight (lb/lb-mole)			

Maximum Vapor Pressure 39F. True (psia)			
39G. Reid (psia)			
Months Storage per Year 39H. From			
39I. To			

VI. EMISSIONS AND CONTROL DEVICE DATA (required)

40. Emission Control Devices (check as many as apply): Does Not Apply

- Carbon Adsorption¹
- Condenser¹
- Conservation Vent (psig)
 - Vacuum Setting 2" water column Pressure Setting 10" water column
- Emergency Relief Valve (psig)
- Inert Gas Blanket of
- Insulation of Tank with
- Liquid Absorption (scrubber)¹
- Refrigeration of Tank
- Rupture Disc (psig)
- Vent to Incinerator¹
- Other¹ (describe):

¹ Complete appropriate Air Pollution Control Device Sheet.

41. Expected Emission Rate (submit Test Data or Calculations here or elsewhere in the application).

Material Name & CAS No.	Breathing Loss (lb/hr)	Working Loss		Annual Loss (lb/yr)	Estimation Method ¹
		Amount	Units		
Methanol 67-56-1	5 pounds	866	pounds	871	Tanks4
Dimethyl Formamide 68-12-2	1 pound	212	pounds	213	Tanks4

¹ EPA = EPA Emission Factor, MB = Material Balance, SS = Similar Source, ST = Similar Source Test, Throughput Data, O = Other (specify)

Remember to attach emissions calculations, including TANKS Summary Sheets if applicable.

Attachment M

Control Device Sheets

Steam Injection

20. Will steam injection be used? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	21. Steam pressure N/A PSIG Minimum Expected: Design Maximum:
22. Total Steam flow rate: N/A LB/hr	23. Temperature: N/A °F
24. Velocity N/A ft/sec	25. Number of jet streams N/A
26. Diameter of steam jets: N/A in	27. Design basis for steam injected: N/A LB steam/LB hydrocarbon
28. How will steam flow be controlled if steam injection is used? N/A	

Characteristics of the Waste Gas Stream to be Burned

29. Name	Quantity Grains of H ₂ S/100 ft ³	Quantity (LB/hr, ft ³ /hr, etc)	Source of Material
Waste Gas	N/A	50,000 SCFH	Vent Gases
30. Estimate total combustible to flare: 50,000 SCFH LB/hr or ACF/hr (Maximum mass flow rate of waste gas) ~833 scfm			
31. Estimated total flow rate to flare including materials to be burned, carrier gases, auxiliary fuel, etc.: LB/hr or ACF/hr			
32. Give composition of carrier gases: (% by volume) Methylamine 1-3%, Dimethylamine 5-20%, Trimethylamine 5-10%, Methanol 2-5%, Ammonia 5-15%, CO 5-10%, Dimethyl ether 2-5%, Dimethyl Formamide 1-5%, Methane 0-1% Nitrogen 2-74%			
33. Temperature of emission stream: ~135 °F Heating value of emission stream: 500 BTU/ft ³ Mean molecular weight of emission stream: MW = ~21.0 lb/lb-mole		34. Identify and describe all auxiliary fuels to be burned. Natural Gas ~1030 BTU/scf BTU/scf BTU/scf BTU/scf	
35. Temperature of flare gas: ~1000 °F		36. Flare gas flow rate: ~833 scf/min	
37. Flare gas heat content: 500 BTU/ft ³		38. Flare gas exit velocity: 32-38 ft/sec scf/min	
39. Maximum rate during emergency for one major piece of equipment or process unit:			scf/min
40. Maximum rate during emergency for one major piece of equipment or process unit:			BTU/min
41. Describe any air pollution control device inlet and outlet gas conditioning processes (e.g., gas cooling, gas reheating, gas humidification): None			
42. Describe the collection material disposal system: None			
43. Have you included Flare Control Device in the Emissions Points Data Summary Sheet? Yes			

44. Proposed Monitoring, Recordkeeping, Reporting, and Testing

Please propose monitoring, recordkeeping, and reporting in order to demonstrate compliance with the proposed operating parameters. Please propose testing in order to demonstrate compliance with the proposed emissions limits.

MONITORING:

Monitor the presence of a pilot flame.
Visual emissions checks.

RECORDKEEPING:

Records of pilot flame continuous operation.
Records of pilot flame outage.
Visible emission checks

REPORTING:

None

TESTING:

None

MONITORING:

Please list and describe the process parameters and ranges that are proposed to be monitored in order to demonstrate compliance with the operation of this process equipment or air control device.

RECORDKEEPING:

Please describe the proposed recordkeeping that will accompany the monitoring.

REPORTING:

Please describe any proposed emissions testing for this process equipment on air pollution control device.

TESTING:

Please describe any proposed emissions testing for this process equipment on air pollution control device.

45. Manufacturer's Guaranteed Capture Efficiency for each air pollutant.

100% capture of waste gases

46. Manufacturer's Guaranteed Control Efficiency for each air pollutant.

98% control efficiency of waste gases

47. Describe all operating ranges and maintenance procedures required by Manufacturer to maintain warranty.

Attachment N

Emission Calculations

TANKS 4.0.9d
Emissions Report - Detail Format
Tank Identification and Physical Characteristics

Identification

User Identification:
City:
State:
Company:
Type of Tank:
Description:

S-102 Storage Tank
Charleston
West Virginia
DuPont
Vertical Fixed Roof Tank
Overhead Methanol Tank

DMF32

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Metereological Data used In Emissions Calculations: Charleston, West Virginia (Avg Atmospheric Pressure = 14.25 psfa)

TANKS 4.0.9d
Emissions Report - Detail Format
Liquid Contents of Storage Tank

S-102 Storage Tank - Vertical Fixed Roof Tank
Charleston, West Virginia

Material Component	Month	Daily Liquid Surface Temperature (deg F)			Liquid Bulk Temp (deg F)	Vapor Pressure (psia)			Vapor Mol. Wt./M.	Liquid Misc. Fract.	Vapor Misc. Fract.	Mol. Wt./M.	Basis for Vapor Pressure Calculations
		Avg	Min	Max		Avg	Min	Max					
Methyl Alcohol	All	55.87	51.31	62.04	55.00	1.2277	1.0903	1.5313	37.0450			32.04	Option 2, A=7.817, B=1471.08, C=229.13

TANKS 4.0.9d
Emissions Report - Detail Format
Detail Calculations (AP-42)

S-102 Storage Tank - Vertical Fixed Roof Tank
Charleston, West Virginia

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Total Losses (lb)

3.59763E4

TANKS 4.0.9d
Emissions Report - Detail Format
Individual Tank Emission Totals

Emissions Report for: Annual

S-102 Storage Tank - Vertical Fixed Roof Tank
Charleston, West Virginia

Components	Losses(lbs)		Total Emissions
	Working Loss	Breathing Loss	
Methyl alcohol	3,658.92	40.11	3,697.04

TANKS 4.0.9d
Emissions Report - Detail Format
Tank Identification and Physical Characteristics

Identification	
User Identification:	S-110 Storage Tank DMF 37
City:	Charleston
State:	West Virginia
Company:	DuPont
Type of Tank:	Vertical Fixed Roof Tank
Description:	Refined DMF Storage Tank

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Metereological Data used in Emissions Calculations: Charleston, West Virginia (Avg Atmospheric Pressure = 14.25 psia)

TANKS 4.0.9d
 Emissions Report - Detail Format
 Liquid Contents of Storage Tank

S-110 Storage Tank - Vertical Fixed Roof Tank
 Charleston, West Virginia

Major Component	MOSH	Daily Liquid Surface Temperature (deg F)			Liquid Bulk Temp (deg F)	Vapor Pressure (psia)			Vapor Mol Weight	Liquid Mass Fract	Vapor Mass Fract	Mol Weight	Basis for Vapor Pressure Calculations
		Avg	Min	Max		Avg	Min	Max					
Dichloromethane	A1	58.47	51.31	62.04	55.00	0.0333	0.0033	0.0438	73.050			73.09	Option 2, A=1.928, B=11.0147, C=168.43

TANKS 4.0.9d
Emissions Report - Detail Format
Detail Calculations (AP-42)

S-110 Storage Tank - Vertical Fixed Roof Tank
Charleston, West Virginia

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Total Losses (lb)

1,811.6553

TANKS 4.0.9d
Emissions Report - Detail Format
Individual Tank Emission Totals

Emissions Report for: Annual

S-110 Storage Tank - Vertical Fixed Roof Tank
Charleston, West Virginia

Components	Losses(lbs)		Total Emissions
	Working Loss	Breathing Loss	
Dimethyl formamide	1,810.22	1.44	1,811.66

TANKS 4.0.9d
Emissions Report - Detail Format
Tank Identification and Physical Characteristics

Identification	
User Identification:	Fresh Methanol Tank S-112 AMB2
City:	Charleston
State:	West Virginia
Company:	DuPont
Type of Tank:	Vertical Fixed Roof Tank
Description:	Fresh Methanol Tank

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Metereological Data used in Emissions Calculations: Charleston, West Virginia (Avg Atmospheric Pressure = 14.25 psia)

TANKS 4.0.9d
Emissions Report - Detail Format
Liquid Contents of Storage Tank

Fresh Methanol Tank - Vertical Fixed Roof Tank
Charleston, West Virginia

Name/Component	Month	Daily Liquid Svl Temperature (°F)			Liquid Svl Temp (°F)	Vapor Pressure (psia)			Vapor Mol. Weight	Liquid Mass Fract.	Vapor Mass Fract.	MOL Wt%	Basis for Vapor Pressure Criteria/Notes
		Avg	Min	Max		Avg	Min	Max					
Methyl alcohol	All	88.87	81.01	82.84	88.09	1.2177	1.0906	1.5373	32.0409			32.04	Option 2, A=2.497, B=1871.03, C=228.13

TANKS 4.0.9d
Emissions Report - Detail Format
Detail Calculations (AP-42)

Fresh Methanol Tank - Vertical Fixed Roof Tank
Charleston, West Virginia

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Total Emissions (lb)

2,814.4975

TANKS 4.0.9d
Emissions Report - Detail Format
Individual Tank Emission Totals

Emissions Report for: Annual

Fresh Methanol Tank - Vertical Fixed Roof Tank
Charleston, West Virginia

Components	Losses(lbs)		
	Working Loss	Breathing Loss	Total Emissions
Methyl alcohol	2,674.47	40.11	2,814.59

TANKS 4.0.9d
Emissions Report - Detail Format
Tank Identification and Physical Characteristics

Identification:	
User Identification:	Oil-grade DMF
City:	Charleston
State:	West Virginia
Company:	
Type of Tank:	Vertical Fixed Roof Tank
Description:	Oil-grade DMF S113 DMF 29

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Metereological Data used in Emissions Calculations: Charleston, West Virginia (Avg Atmospheric Pressure = 14.26 psia)

TANKS 4.0.9d
 Emissions Report - Detail Format
 Liquid Contents of Storage Tank

Off-grade DMF - Vertical Fixed Roof Tank
 Charleston, West Virginia

Mixture Component	Month	Daily Liquid Spill Temperature (deg F)			Liquid Bulk Temp (deg F)	Vapor Pressure (psia)			Vapor Mol. Wt.	Liquid Mass Fract.	Vapor Mass Fract.	Std. Weight	Basis for Vapor Pressure Calculation
		Avg	Min	Max		Avg	Min	Max					
Dimethyl formamide	JA	58.87	51.31	62.04	55.00	0.2908	0.2432	0.3453	38.0231	0.0000	0.1992	44.28	Option 2, A=0.928, B=1100.87, C=159.43
Dimethyl formamide						0.0353	0.0253	0.0438	73.0200			23.69	Option 2, A=0.928, B=1100.87, C=159.43
Methyl alcohol						1.2977	1.0908	1.5973	32.0460	0.1000	0.6533	32.04	Option 2, A=7.937, B=1174.69, C=222.13

TANKS 4.0.9d
Emissions Report - Detail Format
Detail Calculations (AP-42)

Off-grade DMF - Vertical Fixed Roof Tank
Charleston, West Virginia

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Total Emissions (lb)

1,034.4335

TANKS 4.0.9d
Emissions Report - Detail Format
Individual Tank Emission Totals

Emissions Report for: Annual

Off-grade DMF - Vertical Fixed Roof Tank
Charleston, West Virginia

Components	Losses(lbs)		
	Working Loss	Breathing Loss	Total Emissions
Dimethyl formamide	1,077.76	6.67	1,084.44
Dimethyl formamide	212.04	1.31	213.35
Methyl alcohol	865.72	5.36	871.09

Attachment O

Monitoring, Recordkeeping, Reporting

Attachment O

Monitoring, Recordkeeping, Reporting

S112 Tank (AM82) – See Section 4.0 of current Title V permit (R30-03900001-2011)

S113 (DMF29), S102 (DMF32) and S110 (DMF37) – Section Section 5.0 of current Title V permit (R30-03900001-2011)

Attachment P
Public Notice

LEGAL ADVERTISEMENT

AIR QUALITY PERMIT NOTICE Notice of Application

Notice is given that E.I. du Pont de Nemours and Company has applied to the West Virginia Department of Environmental Protection, Division of Air Quality, for a Construction Permit for replacement of four storage tanks located on the Belle Plant at 901 West Dupont Avenue, Belle, in Kanwaha County, West Virginia. The latitude and longitude coordinates are: 451.848 Northing and 4,232.589 Easting.

The applicant estimates the potential to discharge the following Regulated Air Pollutants (Dimethylformamide and Methanol) will not be increased as a result of this change.

Startup of operation is planned to begin on or about the 15th day of January, 2015. Written comments will be received by the West Virginia Department of Environmental Protection, Division of Air Quality, 601 57th Street, SE, Charleston, WV 25304, for at least 30 calendar days from the date of publication of this notice.

Any questions regarding this permit application should be directed to the DAQ at (304) 926-0499, extension 1227, during normal business hours.

Dated this the 6th day of January, 2015.

By: E.I. du Pont de Nemours and Company
James A. O'Connor
Plant Manger
901 West Dupont Avenue
Belle, WV 25015

Attachment Q
Confidential Business Information Claim

Cover Document for Confidential Information

Company Name	E. I. DuPont	Responsible Official		
Company Address	901 W. DuPont Ave.	Confidential Information Designee in State of WV	Name	James A. O'Connor
	Belle, WV 25015		Title	Plant Manager
			Address	901 West DuPont Ave.
				Belle, WV 25015
Person/Title Submitting Confidential Information	LeAnne S. Wheeler		Phone	304-357-1200
	Site Environmental Coordinator		Fax	304-357-1204

Reason for Submittal Of Confidential Information Permit application for Amines Tank Farm

Identification of Confidential Information	Rationale for Confidential Claim 45CSR31-4.1a-e	Confidential Treatment Time Period
Attachment E Plot Plan Drawings Attachment F Process Flow Diagrams Attachment G Process Description Attachment I Emission Units Table – equipment capacity Attachment L Emission Unit Data Sheets – equipment design and throughput Attachment N – Emissions Calculations – equipment design and throughput	a. DuPont continues to claim business confidentiality protection for this business. The claim has not expired by its term, or been waived or withdrawn. The confidential information should continue to be maintained as such for an indefinite time period. See attached for b-e	Permanent

Responsible Official Signature:	
Responsible Official Title:	Plant Manager
Date Signed:	01/05/2015

NOTE: Must be signed and dated in **BLUE INK**.

Rationale for Confidentiality Claim (Cont.)

b. Information claimed confidential is not available to the general public. Within the company, DuPont has distributed technical information on a need-to-know basis and has used its business confidentiality policy to prevent inadvertent dissemination of information. This policy includes:

- * Marking of business confidential documents,
- * Limited distribution of documents,
- * Shredding of confidential documents before disposal.

Employees are aware of the competitive nature of their business and are trained in guarding confidential information. Within DuPont, a corporate program – “PIP” (Proprietary Information Protection) – is used to raise awareness for handling and disclosure of confidential information, which is documented in, document number GS-10346, “Guidelines for Safe Guarding DuPont Company Documents and Information”.

- c. Information revealing the process technology in this submittal is not reasonably obtainable by persons other than DuPont employees who need to know. To maintain the confidentiality of such information, DuPont employees involved with confidential information sign a confidentiality agreement as stipulated by DuPont Legal. Transmittal of confidential information is done by certified mail or is delivered in person by a DuPont employee.
- d. There is no statute that has been reviewed that requires disclosure of information claimed to be confidential.
- e. DuPont claims business confidentiality protection for the information submitted since disclosure would allow competent engineers within a competitor’s company to determine the manner or process by which DuPont produces this product and would provide competitors information without paying for technology or conducting research and development necessary to obtain the technology.

Attachment S

Title V Permit Revision Information

Attachment S

Title V Permit Revision Information

1. New Applicable Requirements Summary	
Mark all applicable requirements associated with the changes involved with this permit revision:	
<input type="checkbox"/> SIP	<input type="checkbox"/> FIP
<input checked="" type="checkbox"/> Minor source NSR (45CSR13)	<input type="checkbox"/> PSD (45CSR14)
<input type="checkbox"/> NESHAP (45CSR15)	<input type="checkbox"/> Nonattainment NSR (45CSR19)
<input type="checkbox"/> Section 111 NSPS (Subpart(s) _____)	<input checked="" type="checkbox"/> Section 112(d) MACT standards (Subpart(s) <u>G and H</u>)
<input type="checkbox"/> Section 112(g) Case-by-case MACT	<input type="checkbox"/> 112(r) RMP
<input type="checkbox"/> Section 112(i) Early reduction of HAP	<input type="checkbox"/> Consumer/commercial prod. reqts., section 183(e)
<input type="checkbox"/> Section 129 Standards/Reqs.	<input type="checkbox"/> Stratospheric ozone (Title VI)
<input type="checkbox"/> Tank vessel reqt., section 183(f)	<input type="checkbox"/> Emissions cap 45CSR§30-2.6.1
<input type="checkbox"/> NAAQS, increments or visibility (temp. sources)	<input type="checkbox"/> 45CSR27 State enforceable only rule
<input type="checkbox"/> 45CSR4 State enforceable only rule	<input type="checkbox"/> Acid Rain (Title IV, 45CSR33)
<input type="checkbox"/> Emissions Trading and Banking (45CSR28)	<input type="checkbox"/> Compliance Assurance Monitoring (40CFR64) ⁽¹⁾
<input type="checkbox"/> NO _x Budget Trading Program Non-EGUs (45CSR1)	<input type="checkbox"/> NO _x Budget Trading Program EGUs (45CSR26)
<p>⁽¹⁾ If this box is checked, please include Compliance Assurance Monitoring (CAM) Form(s) for each Pollutants Specific Emission Unit (PSEU) (See Attachment H to Title V Application). If this box is not checked, please explain why Compliance Assurance Monitoring is not applicable:</p> <p style="padding-left: 40px;">Exempt because all emission units are subject to HON</p>	

2. Non Applicability Determinations
<p>List all requirements, which the source has determined not applicable to this permit revision and for which a permit shield is requested. The listing shall also include the rule citation and a rationale for the determination.</p>
<input type="checkbox"/> Permit Shield Requested <i>(not applicable to Minor Modifications)</i>
<i>All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.</i>

3. Suggested Title V Draft Permit Language

Are there any changes involved with this Title V Permit revision outside of the scope of the NSR Permit revision? Yes No If Yes, describe the changes below.

Also, please provide **Suggested Title V Draft Permit language** for the proposed Title V Permit revision (including all applicable requirements associated with the permit revision and any associated monitoring /recordkeeping/ reporting requirements), OR attach a marked up pages of current Title V Permit. Please include appropriate citations (Permit or Consent Order number, condition number and/or rule citation (e.g. 45CSR§7-4.1)) for those requirements being added / revised.

Suggested Title V draft language was submitted with Title V Minor Modification Application previously submitted.

4. Active NSR Permits/Permit Determinations/Consent Orders Associated With This Permit Revision

Permit or Consent Order Number	Date of Issuance	Permit/Consent Order Condition Number
CO-R13-E-2014-30	12/15/2014	Order for Compliance Condition 3.
	/ /	
	/ /	

5. Inactive NSR Permits/Obsolete Permit or Consent Orders Conditions Associated With This Revision

Permit or Consent Order Number	Date of Issuance	Permit/Consent Order Condition Number
	MM/DD/YYYY	
	/ /	
	/ /	

6. Change in Potential Emissions

Pollutant	Change in Potential Emissions (+ or -), TPY
Methanol	No change
Dimethylformamide	No change

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

7. Certification For Use Of Minor Modification Procedures (Required Only for Minor Modification Requests)

Note: This certification must be signed by a responsible official. Applications without a signed certification will be returned as incomplete. The criteria for allowing the use of Minor Modification Procedures are as follows:

- i. Proposed changes do not violate any applicable requirement;
- ii. Proposed changes do not involve significant changes to existing monitoring, reporting, or recordkeeping requirements in the permit;
- iii. Proposed changes do not require or change a case-by-case determination of an emission limitation or other standard, or a source-specific determination for temporary sources of ambient air quality impacts, or a visibility increment analysis;
- iv. Proposed changes do not seek to establish or change a permit term or condition for which there is no underlying applicable requirement and which permit or condition has been used to avoid an applicable requirement to which the source would otherwise be subject (synthetic minor). Such terms and conditions include, but are not limited to a federally enforceable emissions cap used to avoid classification as a modification under any provision of Title I or any alternative emissions limit approved pursuant to regulations promulgated under § 112(j)(5) of the Clean Air Act;
- v. Proposed changes do not involve preconstruction review under Title I of the Clean Air Act or 45CSR14 and 45CSR19;
- vi. Proposed changes are not required under any rule of the Director to be processed as a significant modification;

Notwithstanding subparagraph 45CSR§30-6.5.a.1.A. (items i through vi above), minor permit modification procedures may be used for permit modifications involving the use of economic incentives, marketable permits, emissions trading, and other similar approaches, to the extent that such minor permit modification procedures are explicitly provided for in rules of the Director which are approved by the U.S. EPA as a part of the State Implementation Plan under the Clean Air Act, or which may be otherwise provided for in the Title V operating permit issued under 45CSR30.

Pursuant to 45CSR§30-6.5.a.2.C., the proposed modification contained herein meets the criteria for use of Minor permit modification procedures as set forth in Section 45CSR§30-6.5.a.1.A. The use of Minor permit modification procedures are hereby requested for processing of this application.

(Signed): _____ <i>(Please use blue ink)</i>	Date: ____/____/____ <i>(Please use blue ink)</i>
Named (typed): <i>James A. O'Connor</i>	Title: <i>Plant Manager</i>

Note: Please check if the following included (if applicable):

- | | |
|--------------------------|---|
| <input type="checkbox"/> | Compliance Assurance Monitoring Form(s) |
| <input type="checkbox"/> | Suggested Title V Draft Permit Language |

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