



Division of Air Quality
Compliance & Enforcement Section
Compliance Monitoring Report

* Filing Instructions in page footer

| FACILITY INFORMATION | | | |
|----------------------|-------------------|--|-----------------------|
| FACILITY ID : | 039-00035 | Etowah River Terminal, LLC, Charleston Charleston | |
| Address : | 1015 BARLOW DRIVE | | |
| City : | CHARLESTON | State : WV | Zip : 24311 |
| Phone # : | 3043450967 | Ext : | |
| Inspection Summary: | Level | Reason | Overall Result |
| | FullOnSite | Targeted | In Compliance |
| Insp On/ By: | 06/29/2009 | Keatley, Robert L. | |
| Completion : | | | |

| GENERAL INFORMATION | | | |
|--|----------------------------------|-------------------------------------|--|
| Monitoring Category | Major: <input type="checkbox"/> | Syn Minor: <input type="checkbox"/> | Minor: <input checked="" type="checkbox"/> |
| Physical Address | Directions | | |
| 1015 BARLOW DRIVE, CHARLESTON WV 24311 | [NONE] | | |
| Escort : <input type="checkbox"/> | Gated : <input type="checkbox"/> | | |
| Unmanned : <input type="checkbox"/> | 4WD : <input type="checkbox"/> | | |

| PPE & SAFETY REQUIREMENTS | | | | |
|---|-------------------------------------|-----------------------------------|---|--------------------------------|
| Safety Glasses <input type="checkbox"/> | Steel Toes <input type="checkbox"/> | Hard Hat <input type="checkbox"/> | Hearing Protection <input type="checkbox"/> | Other <input type="checkbox"/> |
| | | | | |

CONTACT INFORMATION

INSPECTION COMMENT

| |
|--|
| |
|--|

Regulations**Subparts****[NONE]****SIC**

| | | |
|------|----------------------------------|-------------------------------------|
| 5092 | WHOLESALE TRADE-DURABLE GOODS | TOYS AND HOBBY GOODS AND SUPPLIES |
| 5171 | WHOLESALE TRADE-NONDURABLE GOODS | PETROLEUM BULK STATIONS & TERMINALS |

COMPLIANCE HISTORY

| Last Enforcement | | Last Enforcement Date | | |
|--------------------|------------|------------------------|---------------|-------|
| Prev Inspection On | 05/03/2005 | Prev Inspection Status | In Compliance | |
| Inspection Date | Reason | Level | Result | Notes |
| 06/29/2009 | Targeted | FullOnSite | 30 | |

INSPECTION SUMMARY

| | |
|---|---|
| Photos taken : <input type="checkbox"/> | Visual Emissions taken : <input type="checkbox"/> |
| Facility : Etowah River Terminal, LLC, Charleston | Facility Status : In Compliance |
| Inspector Signature : | Completion Date : |

| From | Date | To | Comments |
|------|------|----|----------|
| | | | |
| | | | |
| | | | |
| | | | |

AIRS INFO ERROR MSGS :

No required information is missing.

| | | | | |
|---------------------|------------|---------------------|-------------------------|----------|
| ID 039-00035 | Charleston | Insp on :06/29/2009 | Printed on : 09/01/2009 | Page : 3 |
| File Stamp : | | | NON-CONFIDENTIAL | |

Internal Ref # : 105965



INSPECTION MEMORANDUM

DIVISION OF ENVIRONMENTAL PROTECTION

West Virginia Office of Air Quality

| | | | | | |
|----------|---|------------|-----------|--------------|----|
| Company: | Etowah River Terminal (formerly Pennzoil-Quaker State Company) 1015 Barlow Drive Charleston, WV 25311 | | Facility: | Charleston | |
| Region: | 4 | Plant ID#: | 039-00035 | Regulations: | 21 |

Inspected By: Robert Keatley

Title: Engineer

Memo Date: 09/01/2009

Inspection Date: 06/29/2009

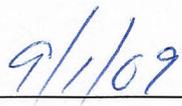
On June 29, 2009, Todd Shrewsbury and I conducted an unannounced compliance inspection of the Etowah River Terminal (formerly Pennzoil-Quaker State Company) facility located at Charleston, WV. The contact person at the facility was Roger Arthur (304-720-8065), Terminal Manager. The facility is no longer a Bulk Gasoline Terminal and removed all remaining petroleum products (gasoline, diesel, etc.) from the storage tanks at the end of July 2001. The facility stores chemicals for the mining industry such as: CaCl₂ (chemical used to treat haul roads), flocculent agent (chemical used to change the specific gravity), and several different concentrations of glycols. The facility generally has more business from the middle of November to the middle of March, during this time the facility averages 25 trucks per day and operates two shifts. The facility no longer operates the flare to unload trucks, because the chemicals stored are not very flammable. The facility submitted information concerning changing the facility from a bulk gasoline terminal into a chemical storage facility. This information indicated the facility did not need to obtain a permit and it is contained in the file. If the facility changes any of the chemicals stored in the storage tanks or changes the process, then the DAQ needs to reevaluate whether the facility needs a permit. The facility stated they have not changed any of the chemicals being stored.

The facility provided a list of materials on-site and a plot diagram of the storage tanks. The facility has several active 420,000 gallon storage tanks.: five (5) with 10-50% glycol, three (3) with 28-35% CaCl₂, and one water tank. The facility has two active 47,000 gallon storage tanks with a specialty chemical ammonium lignosulfonate and one 47,000 gallon tank empty. I have attached the MSDS's for these chemicals to this report. The facility receives CaCl₂ by barge/truck and all other chemicals by truck. The facility does do some minor mixing to obtain the specific concentration of glycol and/or CaCl₂ as needed. These two chemicals are the facility's primary products.

No violations were found. Status Code 30 - "Facility In Compliance".



 Robert Keatley
 Engineer



 Date

| | | | |
|-------------------------|----|-----------------------|-----|
| Photographs Taken: | No | ITS Updated: | Yes |
| Visual Emissions Taken: | No | Facility Status Code: | 30 |

Inspection of Etowah River Terminal
Inspected on 06/29/2009

Etowah River Terminal Inventory Status Report

| <i>Item</i> | <i>Description</i> | <i>Reference</i> | <i>On Hand</i> | <i>Gravity</i> | <i>Density</i> |
|----------------------------------|--------------------|------------------|----------------|----------------|----------------|
| FCA 1010 <i>CaCl₂</i> | LIGON FCA1000 | 406 & 403 | 0 | 1.262 | 10.530 |
| LIGON <i>GLYCERIN</i> | | TANK 406 | 14,228 | 1.258 | 10.500 |
| Propanediol | | TANK 393 | 36,930 | 1.140 | 9.510 |
| IWL,HARTLAND <i>GLYCERIN</i> | | TANK 394 | 38,498 | 1.130 | 9.430 |
| TANK CLEAN OUT | TANK CLEAN OUT | TANK 395 | 20,721 | 0.000 | 0.000 |
| MCHM | MCHM | TANK 396 | 37,013 | 0.930 | 7.760 |
| MCHM- | MCHM | TANK 397 | 12,877 | 0.930 | 7.760 |
| OUT OF SERVICE | | TANK 398 | 0 | 1.265 | 10.560 |
| STEPHAN GLYCERIN= | STEPHAN GLYCERIN | TANK 399 | 87,999 | 1.258 | 10.500 |
| Tank Bottoms & IWL Everc | Tank Bottoms & IWL | TANK 400 | 349,668 | 1.266 | 10.561 |
| TANK BOTTOMS | | TANK 401 | 211,404 | 1.120 | 9.350 |
| TANK BOTTOMS | | TANK 402 | 51,464 | 1.232 | 10.280 |
| RDC100 <i>CaCl₂</i> | FINISHED PRODUCT | TANK 403 | 268,190 | 1.262 | 10.530 |
| 35% CALCIUM CHLORIDE | FINISHED PRODUCT | TANK 404 | 246,397 | 1.340 | 11.180 |
| BRINE | BRINE | TANK 405 | 113,109 | | |

**Regulation 13 Permit Determination Request
Freedom Industries – Elk River Bulk Storage Facility, Charleston, WV**

Emissions Calculations and Supplemental Data

STORAGE TANKS PHYSICAL DATA SUMMARY

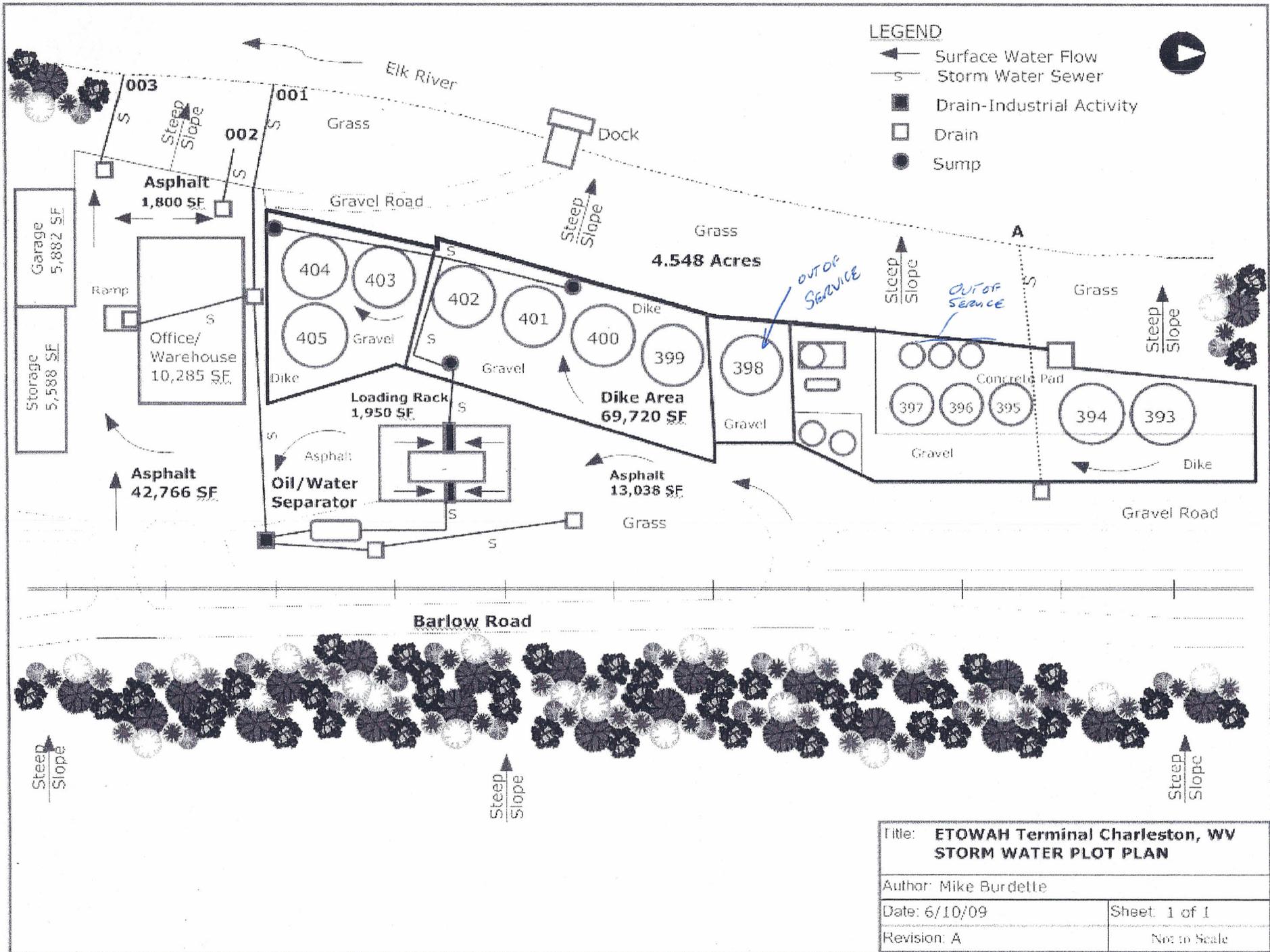
| Storage Tank & Tank Vent ID# | Tank Height (feet) | Tank Diameter (feet) | Tank Volume (gallons) |
|------------------------------|--------------------|----------------------|-----------------------|
| 393 | 42.4 | 42.0 | 424,000 |
| 394 | 41.0 | 42.0 | 409,000 |
| 398 | 36.0 | 44.0 | 391,000 |
| 399 | 33.0 | 44.0 | 363,000 |
| 400 | 36.0 | 43.0 | 394,000 |
| 401 | 36.0 | 43.0 | 394,000 |
| 402 | 36.0 | 43.0 | 394,000 |
| 403 | 36.0 | 45.0 | 409,000 |
| 404 | 36.0 | 45.0 | 409,000 |
| 405 | 42.0 | 42.0 | 424,000 |

STORAGE TANKS CHEMICAL DATA SUMMARY

| Chemicals Stored | Chemical Composition | Raw Material or Product? | #Storage Tanks Utilized | Max. Annual Throughput (lb/yr) | Maximum Vapor Pressure (psi) (KPa) | |
|---|---|----------------------------------|-------------------------|---|------------------------------------|--------------------|
| | | | | | (psi) | (KPa) |
| Diethylene Glycol (DEG) | 100% Diethylene Glycol | Raw Material | 1 | 15,000,000 (of Total Glycol Raw Materials) | 0.0001 | 0.0007 |
| 25% Propylene Glycol (PG) | 25% Propylene Glycol 75% Water | Raw Material | 2 | | 0.0011 (PG only) | 0.008 (PG only) |
| Heavy Ends-PDO-Geismar (Shell Chemical Co.) | 80% 1,3-Propanediol 3% Ethylene Glycol - 100% 1% Ethanol 7% Organic Acid Salt 5% Water 4% Misc. Heavy Organics → See MSDS for details. | Raw Material | 1 | | 0.0934 (total) | 0.64 (total) |
| Glycol Solutions Product A | 50% Diethylene Glycol 50% Water | Product | 1 | 30,000,000 (of Total Glycol Products) | See above | See above |
| Glycol Solutions Product B | 12.5% Propylene Glycol 87.5% Water | Product | 1 | | See above | See above |
| Glycol Solutions Product C | 50% PDO-Geismar 50% Water | Product | 1 | | See above | See above |
| 35% Calcium Chloride | 35% Calcium Chloride 65% Water | Raw Material (resold as Product) | 2 | 12,000,000 (of Total Dry CaCl) | NA | NA |
| 28% Calcium Chloride | 28% Calcium Chloride 72% Water | Raw Material (resold as Product) | 1 | | NA | NA |

NOTE: Glycol Solutions Products are a 50%-50% mixture of the Glycol Raw Material and water. Please refer to MSDSs for further details on the glycol raw materials.

NON-CONFIDENTIAL



- LEGEND**
- ← Surface Water Flow
 - s- Storm Water Sewer
 - Drain-Industrial Activity
 - Drain
 - Sump

| | |
|--|---------------|
| Title: ETOWAH Terminal Charleston, WV STORM WATER PLOT PLAN | |
| Author: Mike Burdette | |
| Date: 6/10/09 | Sheet: 1 of 1 |
| Revision: A | Not to Scale |



Tank 393

PDO Concentrate

MATERIAL SAFETY DATA SHEET

Preparation date: June 16, 2009
Page 1 of 6

SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: PDO Concentrate MSDS REVISION #: New

DISTRIBUTED BY: Freedom Industries, Inc.
1015 Barlow Drive
Charleston, WV 25311

PHONE NUMBERS: Business - (304) 720-8065
ChemTrec - (800) 424-9300

SECTION 2 - HAZARDS IDENTIFICATION

***** **EMERGENCY OVERVIEW** *****

Caution! Product is a yellow liquid with a mild odor. The material can cause skin and eye irritation. Avoid contact with skin, eyes and clothing. Wear protective goggles and gloves when handling this product. Wash thoroughly after handling.

This product is considered hazardous under the OSHA HazCom Standard (29 CFR 1910.1200)

POTENTIAL HEALTH EFFECTS

LIKELY ROUTES OF EXPOSURE:
Eye and skin contact and inhalation

EYES:
Can cause irritation, redness and tearing.

SKIN:
Prolonged or repeated contact may cause mild irritation. Persons with pre-existing skin conditions are particularly susceptible.

INGESTION (swallowing):
May cause irritation, nausea, vomiting and diarrhea.

Section 2 continued on next page

MATERIAL SAFETY DATA SHEET

Preparation date: June 16, 2009
Page 2 of 6**SECTION 2 - HAZARDS IDENTIFICATION (continued)**

INHALATION (breathing):

Spray or mist can cause irritation to the nose, throat and lungs.

CHRONIC EFFECTS/CARCINOGENICITY:

This product (or component) is not listed in IARC Monographs, the NTP Eleventh Report on Carcinogens or the ACGIH TLVs as a carcinogen or potential carcinogen. OSHA does not regulate it as a carcinogen.

SECTION 3 - COMPOSITION / INFORMATION ON INGREDIENTS

| <u>Component</u> | <u>%</u> | <u>CAS No.</u> |
|------------------|----------|----------------|
| Glycerin | 10-20 | 56-81-5 |
| 1,3-Propanediol | 60-80 | 504-63-2 |
| Water | 10-20 | 7732-18-5 |

SECTION 4 - FIRST AID MEASURES

EYE CONTACT:

Flush with large amounts of water for at least 15 minutes, lifting upper and lower lids occasionally. Get medical attention.

SKIN CONTACT:

Wash exposed area with soap and water. Remove contaminated clothing and launder before reuse.

INGESTION (swallowing):

If irritation or nausea develops, contact a physician.

INHALATION (breathing):

If affected, move to fresh air.

MATERIAL SAFETY DATA SHEET

Preparation date: June 16, 2009
Page 3 of 6

SECTION 5 - FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES:

This product contains a large amount of water, and would not normally burn. If heated sufficiently to boil off the water, however, this material will burn.

EXTINGUISHING MEDIA:

Use water fog, foam, dry chemical or carbon dioxide as appropriate for other materials involved in the fire.

PROTECTION OF FIREFIGHTERS:

Keep personnel removed from and upwind. Wear full protective clothing and self-contained breathing apparatus with full face-piece. Cool containers with water. Combustion products include carbon monoxide and carbon dioxide.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Persons not wearing protective equipment should be excluded from the area of the spill until clean up has been completed. Dike area of spill to prevent spreading and pump liquid to salvage tank. Absorb remaining liquid on vermiculite, floor absorbent or other absorbent material and shovel into containers.

SECTION 7 - HANDLING AND STORAGE

HANDLING:

Avoid contact with skin, eyes and clothing. Wash thoroughly after handling.

STORAGE:

Keep in closed or covered containers when not in use. Store in cool dry place with adequate ventilation.

MATERIAL SAFETY DATA SHEET

Preparation date: June 16, 2009

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SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE GUIDELINES:

| | |
|----------------|--|
| Glycerin | OSHA PEL - 15 mg/M ³ (mist) |
| (CAS# 56-81-5) | OSHA PEL - 5 mg/M ³ (respirable fraction) |
| | ACGIH TLV - 10 mg/M ³ (mist) |

ENGINEERING CONTROLS:

Provide sufficient ventilation to maintain exposure below established exposure limits.

EYE / FACE PROTECTION:

Chemical splash goggles in compliance with OSHA regulations are advised when handling any chemical substance.

SKIN PROTECTION:

Wear protective gloves such as Neoprene or Buna-N.

RESPIRATORY PROTECTION:

Not required under normal conditions of use; however, a NIOSH/MSHA approved respirator with organic vapor cartridge is recommended where there is insufficient ventilation to maintain exposure below established exposure limits.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES**Appearance:** Yellow liquid @ 68° F (20° C)**Odor:** Mild**Specific Gravity:** >1 @ 77° F (25° C)**Evaporation Rate:** Slower

(Ethyl Ether = 1)

Solubility in Water: 100%**Vapor Pressure:** 17.5 @ 68° F (20° C)

(water)

Initial Boiling Point: >212° F (100° C)**Volatile %:** 10-20**pH:** Unavailable**Flash Point:** >212° F (100° C) PMCC**Upper Explosion Limit:** Unavailable**Lower Explosion Limit:** Unavailable**Autoignition Temperature:** Unavailable

MATERIAL SAFETY DATA SHEET

Preparation date: June 16, 2009
Page 5 of 6

SECTION 10 - STABILITY AND REACTIVITY

STABILITY (conditions to avoid):

Stable under normal conditions of 70° F (21° C) and 14.7 psig (760 mm Hg)

INCOMPATIBILITIES (materials to avoid):

Avoid contact with strong oxidizing agents

DECOMPOSITION:

Carbon dioxide, carbon monoxide, acrid smoke and fumes

HAZARDOUS POLYMERIZATION:

Not known to occur

SECTION 11 - TOXICOLOGICAL INFORMATION

No data available for product

SECTION 12 - ECOLOGICAL INFORMATION

No data available for product

SECTION 13 - DISPOSAL CONSIDERATIONS

Material that cannot be recovered or reused should be sent to a licensed disposal facility for drying and disposal in a landfill or incineration. Material collected on absorbent material may be deposited in a landfill in accordance with all applicable local, state and federal regulations.

This product, if disposed of, is not considered a hazardous waste under current RCRA definitions.

SECTION 14 - TRANSPORT INFORMATION

Not regulated under current U.S DOT, TDG (Canadian), ICAO (air) or IMO (water) transport regulations.

MATERIAL SAFETY DATA SHEET

Preparation date: June 16, 2009
Page 6 of 6**SECTION 15 - REGULATORY INFORMATION**

TSCA INFORMATION:

All components in this product are in compliance with TSCA Inventory requirements.

SARA 313 INFORMATION:

SARA requires submission of annual reports of release of toxic chemicals that appear in 40 CFR 372. This information must be included in all MSDS that are copied and distributed for this material.

Components present in this product at a level that could require reporting under the statute are: None

SECTION 16 - OTHER INFORMATION

HAZARD RATING:

| | | |
|------------|---|--------------|
| HEALTH | 1 | 0 - LEAST |
| FIRE | 0 | 1 - SLIGHT |
| REACTIVITY | 0 | 2 - MODERATE |
| OTHER | - | 3 - HIGH |
| | | 4 - EXTREME |

HAZARD RATING METHOD: NFPA

REASON FOR REVISION:

New MSDS

The product information contained herein is believed to be accurate as of the date of the Material Safety Data Sheet, and is provided without warranty, expressed or implied, as to the results of use of this information or the product to which it relates. Recipient assumes all responsibility for the use of this information and the use (alone or in combination with any other product), storage or disposal of the product, including any resultant personal injury or property damage.

END OF REPORT

EASTMAN

MATERIAL SAFETY DATA SHEET

Revision Date: 11/09/2004

MSDSUSA/ANSI/EN/150000014291/Version 4.0

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

| | |
|----------------------------------|---|
| Product Name | Crude MCHM |
| Product Identification Number(s) | 18717-00, E1871700, P1871700, P18717EA, P18717ET, P18717YZ |
| Manufacturer/Supplier | Eastman Chemical Company Eastman Road Kingsport, TN 37662 US +14232292000 |
| MSDS Prepared by | Eastman Product Safety and Health |
| Chemical Name | not applicable |
| Synonym(s) | 972790 |
| Molecular Formula | not applicable |
| Molecular Weight | not applicable |
| Product Use | industrial chemical, gasoline blending |
| OSHA Status | hazardous |

For emergency health, safety & environmental information, call 800-EASTMAN.

For emergency transportation information, call CHEMTREC at 800-424-9300 or call 800-EASTMAN.

2. COMPOSITION INFORMATION ON INGREDIENTS

(Typical composition is given, and it may vary. A certificate of analysis can be provided, if available.)

| Weight % | Component | CAS Registry No. |
|----------|---------------------------------------|------------------|
| 68 - 88% | 4-methylcyclohexanemethanol | 34885-03-5 |
| 4 - 22% | 4-(methoxymethyl)cyclohexanemethanol | 88855-27-2 |
| 4 - 10% | water | 7732-18-5 |
| 5% | methyl 4-methylcyclohexanecarboxylate | 51181-40-9 |
| 1% | dimethyl 1,4-cyclohexanedicarboxylate | 84-60-0 |
| 1% | methanol | 67-56-1 |
| 1 - 2% | 1,4-cyclohexanedimethanol | 105-08-6 |

3. HAZARDS IDENTIFICATION

WARNING!
HARMFUL IF SWALLOWED
CAUSES SKIN AND EYE IRRITATION
AT ELEVATED TEMPERATURES, VAPOR MAY CAUSE IRRITATION OF EYES AND
RESPIRATORY TRACT

HMIS® Hazard Ratings: Health - 2, Flammability -1, Chemical Reactivity - 0

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HMIS® rating involves data interpretations that may vary from company to company. They are intended only for rapid, general identification of the magnitude of the specific hazard. To deal adequately with the safe handling of this material, all the information contained in this MSDS must be considered.

4. FIRST-AID MEASURES

Inhalation: Move to fresh air. Treat symptomatically. Get medical attention if symptoms persist.
Eyes: Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention. In case of irritation from airborne exposure, move to fresh air. Get medical attention if symptoms persist.
Skin: Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention. Wash contaminated clothing before reuse. Destroy or thoroughly clean contaminated shoes.
Ingestion: Call a physician or poison control center immediately. Only induce vomiting at the instruction of medical personnel. Never give anything by mouth to an unconscious person.

5. FIRE FIGHTING MEASURES

Extinguishing Media: water spray, dry chemical, carbon dioxide, alcohol foam
Special Fire-Fighting Procedures: Wear self-contained breathing apparatus and protective clothing.
Hazardous Combustion Products: carbon dioxide, carbon monoxide
Unusual Fire and Explosion Hazards: none

6. ACCIDENTAL RELEASE MEASURES

Use personal protective equipment. Absorb spill with vermiculite or other inert material, then place in a container for chemical waste.
For Large Spills: Flush spill area with water spray. Prevent runoff from entering drains, sewers, or streams.

7. HANDLING AND STORAGE

Personal Precautionary Measures: Avoid breathing vapor from heated material. Avoid contact with eyes, skin, and clothing. Do not taste or swallow. Use only with adequate ventilation. Wash thoroughly after handling.
Prevention of Fire and Explosion: Keep from contact with oxidizing materials.
Storage: Keep container closed. Keep away from food, drink and animal foodstuff.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Country specific exposure limits have not been established or are not applicable unless listed below.

METHANOL

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MATERIAL SAFETY DATA SHEET

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US. ACGIH Threshold Limit Values

Time Weighted Average (TWA): 200 ppm,

US. ACGIH Threshold Limit Values

Short Term Exposure Limit (STEL): 250 ppm,

US. ACGIH Threshold Limit Values

Skin designation: Can be absorbed through the skin.

METHYL ALCOHOL

US. NIOSH: Pocket Guide to Chemical Hazards

Recommended exposure limit (REL): 200 ppm, 260 mg/m³

US. NIOSH: Pocket Guide to Chemical Hazards

Short Term Exposure Limit (STEL): 250 ppm, 325 mg/m³

US. NIOSH: Pocket Guide to Chemical Hazards

Skin designation: Can be absorbed through the skin.

METHYL ALCOHOL; METHANOL

US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants

Time Weighted Average (TWA) Permissible Exposure Limit (PEL): 200 ppm, 260 mg/m³

US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants

Ceiling Limit Value: 1,000 ppm,

US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants

Short Term Exposure Limit (STEL): 250 ppm, 325 mg/m³

US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants

Skin designation: Can be absorbed through the skin.

METHYL ALCOHOL

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

PEL: 200 ppm, 260 mg/m³

Ventilation: Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Respiratory Protection: If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. In the United States of America, if respirators are used, a program should be instituted to assure compliance with OSHA Standard 63 FR 1152, January 8, 1998. Respirator type: Air-purifying respirator or with an appropriate, government approved (where applicable), air-purifying filter, cartridge or canister. Contact health and safety professional or manufacturer for specific information

Eye Protection: Wear safety glasses with side shields (or goggles). Wear a full-face respirator, if needed.

Skin Protection: Wear chemical-resistant gloves, footwear, and protective clothing appropriate for the risk of exposure. Contact health and safety professional or manufacturer for specific information.

Recommended Decontamination Facilities: eye bath, safety shower, washing facilities

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical Form: liquid

Color: colorless

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Revision Date: 11/09/2004
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Odor: alcohol
Specific Gravity: < 1 (estimated)
Freezing Point: 0 °C
Boiling Point: 180 °C
Solubility in Water: appreciable
Flash Point: 112.8 °C (Setaflash closed cup)
Thermal Decomposition Temperature: Thermal stability not tested. Low stability hazard expected at normal operating temperatures.

10. STABILITY AND REACTIVITY

Stability: Not fully evaluated. Materials containing similar structural groups are normally stable.
Incompatibility: Material reacts with strong oxidizing agents.
Hazardous Polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Acute toxicity data, if available, are listed below. Additional toxicity data may be available on request.

| | |
|----------------------------------|----------------------------------|
| Oral LD-50: (rat) | 825 mg/kg |
| Dermal LD-50: (rat) | > 2,000 mg/kg (only dose tested) |
| Skin Irritation (rabbit) | strong |
| Skin Sensitization: (guinea pig) | none |

12. ECOLOGICAL INFORMATION

Acute toxicity data, if available, are listed below. Additional toxicity data may be available on request.

Oxygen Demand Data:

BOD-5: 70 mg/g
BOD-20: 1,300 mg/g

COD: 2,540 mg/g

Acute Aquatic Effects Data:

96 h LC-50 (fathead minnow): 57.4 mg/l NOEC: 25 mg/l
48 h EC-50 (daphnid): 98.1 mg/l NOEC: 40 mg/l

13. DISPOSAL CONSIDERATIONS

Discharge, treatment, or disposal may be subject to national, state, or local laws. Incinerate.

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14. TRANSPORT INFORMATION

Important Note: Shipping descriptions may vary based on mode of transport, quantities, package size, and/or origin and destination. Consult your company's Hazardous Materials/Dangerous Goods expert for information specific to your situation.

DOT (USA)

Class not regulated

Sea - IMDG (International Maritime Dangerous Goods)

Class not regulated

Air - ICAO (International Civil Aviation Organization)

Class not regulated

15. REGULATORY INFORMATION

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

WHMIS (Canada) Status: controlled

WHMIS (Canada) Hazard Classification: D/2/B

SARA 311-312 Hazard Classification(s):
immediate (acute) health hazard

SARA 313: none, unless listed below
METHANOL

Carcinogenicity Classification (components present at 0.1% or more): none, unless listed below

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EASTMAN

MATERIAL SAFETY DATA SHEET

Revision Date: 11/09/2004
MSDSUSA/ANSI/EN/150000014291/Version 4.0

- TSCA (US Toxic Substances Control Act):** All components of this product are listed on the TSCA inventory. Any impurities present in this product are exempt from listing.
- DSL (Canadian Domestic Substances List) and CEPA (Canadian Environmental Protection Act):** One or more components of this product are not listed on the DSL. In Canada, its use is restricted to research and development purposes only.
- EINECS (European Inventory of Existing Commercial Chemical Substances):** One or more components or reactants of this product are not listed on EINECS. In the European Union, its use is restricted to research and development purposes only.
- AICS / NICNAS (Australian Inventory of Chemical Substances and National Industrial Chemicals Notification and Assessment Scheme):** One or more components of this product are not listed on AICS. In Australia, its use is restricted to research and development purposes only.
- MITI (Japanese Handbook of Existing and New Chemical Substances):** One or more components or reactants of this product are not listed in the Handbook. In Japan, its use is restricted to research and development purposes only.
- ECL (Korean Toxic Substances Control Act):** One or more components of this product are not listed on the Korean inventory. In Korea, its use is restricted to research and development purposes only.

16. OTHER INFORMATION

Visit our website at www.EASTMAN.com or call 001-423-229-2000.

The information contained herein is based on current knowledge and experience; no responsibility is accepted that the information is sufficient or correct in all cases. Users should consider these data only as a supplement to other information. Users should make independent determinations of suitability and completeness of information from all sources to assure proper use and disposal of these materials, the safety and health of employees and customers, and the protection of the environment.

Highlighted areas indicate new or changed information.

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Calcium Chloride (35%)

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SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MSDS REVISION #: 002

PRODUCT NAME: Calcium Chloride (35%)
SYNONYMS: None
DISTRIBUTED BY: Freedom Industries, Inc.
1015 Barlow Drive
Charleston, WV 25311
PHONE NUMBERS: Business - (304) 720-8065
ChemTrec - (800) 424-9300

SECTION 2 - HAZARDS IDENTIFICATION

***** **EMERGENCY OVERVIEW** *****

Caution! Product is a clear, colorless liquid with little or no odor. The material can cause skin and eye irritation. Avoid contact with skin, eyes and clothing. Wear protective goggles and gloves when handling this product. Wash thoroughly after handling.

This product is considered hazardous under the OSHA HazCom Standard (29 CFR 1910.1200)

POTENTIAL HEALTH EFFECTS

LIKELY ROUTES OF EXPOSURE:

Eye and skin contact

EYES:

Can cause irritation, which may be severe.

SKIN:

Prolonged or repeated contact may cause irritation. Persons with pre-existing skin conditions are particularly susceptible.

INGESTION (swallowing):

Causes irritation. May cause nausea, vomiting and diarrhea.

Section 2 continued on next page

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Page 2 of 6**SECTION 2 - HAZARDS IDENTIFICATION (continued)**

INHALATION (breathing):

Spray or mist can cause irritation to the nose, throat and lungs.

CHRONIC EFFECTS/CARCINOGENICITY:

This product (or component) is not listed in IARC Monographs, the NTP Eleventh Report on Carcinogens or the ACGIH TLVs as a carcinogen or potential carcinogen. OSHA does not regulate it as a carcinogen.

SECTION 3 - COMPOSITION / INFORMATION ON INGREDIENTS

| <u>Component</u> | <u>%</u> | <u>CAS No.</u> |
|------------------|----------|----------------|
| Calcium chloride | 33-37 | 10043-52-4 |
| Water | 63-67 | 7732-18-5 |

SECTION 4 - FIRST AID MEASURES

EYE CONTACT:

Flush with large amounts of water for at least 15 minutes, lifting upper and lower lids occasionally. Get medical attention.

SKIN CONTACT:

Wash exposed area with soap and water. Remove contaminated clothing and launder before reuse.

INGESTION (swallowing):

If irritation or nausea develops, contact a physician.

INHALATION (breathing):

If affected, move to fresh air.

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SECTION 5 - FIRE FIGHTING MEASURES**FLAMMABLE PROPERTIES:**

This product contains a large amount of water, and would not normally burn.

EXTINGUISHING MEDIA:

Use water fog, foam, dry chemical or carbon dioxide as appropriate for other materials involved in the fire.

PROTECTION OF FIREFIGHTERS:

Keep personnel removed from and upwind. Wear full protective clothing and self-contained breathing apparatus with full face-piece. Cool containers with water.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Persons not wearing protective equipment should be excluded from the area of the spill until clean up has been completed. Dike area of spill to prevent spreading and pump liquid to salvage tank. Absorb remaining liquid on vermiculite, floor absorbent or other absorbent material and shovel into containers.

SECTION 7 - HANDLING AND STORAGE**HANDLING:**

Avoid contact with skin, eyes and clothing. Wash thoroughly after handling.

STORAGE:

Keep in closed or covered containers when not in use. Store in cool dry place with adequate ventilation.

SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION**EXPOSURE GUIDELINES:**

Not established for product or components

ENGINEERING CONTROLS:

Not required under normal conditions of use.

Section 8 continued on next page

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SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION (continued)

EYE / FACE PROTECTION:

Chemical splash goggles in compliance with OSHA regulations are advised when handling any chemical substance.

SKIN PROTECTION:

Wear protective gloves such as Neoprene or Buna-N.

RESPIRATORY PROTECTION:

Not required under normal conditions of use.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Clear, colorless liquid @ 68° F (20° C)

Odor: Little or no odor

Specific Gravity: ~1.3 @ 77° F (25° C)

Evaporation Rate: Slower
(Ethyl Ether = 1)

Solubility in Water: 100%

Vapor Pressure: 17.5 @ 68° F (20° C)
(water)

Initial Boiling Point: >212° F (100° C)

Volatile %: >63

pH: Unavailable

Flash Point: >212° F (100° C) PMCC

Upper Explosion Limit: Unavailable

Lower Explosion Limit: Unavailable

Autoignition Temperature: Unavailable

SECTION 10 - STABILITY AND REACTIVITY

STABILITY (conditions to avoid):

Stable under normal conditions of 70° F (21° C) and 14.7 psig (760 mm Hg).

INCOMPATIBILITIES (materials to avoid):

Avoid contact with strong bases

DECOMPOSITION:

Carbon dioxide, carbon monoxide, acrid smoke and fumes

HAZARDOUS POLYMERIZATION:

Not known to occur

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SECTION 11 - TOXICOLOGICAL INFORMATION

No data available for product

SECTION 12 - ECOLOGICAL INFORMATION

No data available for product

SECTION 13 - DISPOSAL CONSIDERATIONS

Material that cannot be recovered or reused should be sent to a licensed disposal facility for drying and disposal in a landfill. Material collected on absorbent material may be deposited in a landfill in accordance with all applicable local, state and federal regulations.

This product, if disposed of, is not considered a hazardous waste under current RCRA definitions.

SECTION 14 - TRANSPORT INFORMATION

Not regulated under current U.S DOT, TDG (Canadian), ICAO (air) or IMO (water) transport regulations.

SECTION 15 - REGULATORY INFORMATION

TSCA INFORMATION:

All components in this product are in compliance with TSCA Inventory requirements.

WV DEP:

This material is approved for use in WV as a dust suppressant as calcium chloride.

Section 15 continued on next page



Calcium Chloride (35%)

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SECTION 15 - REGULATORY INFORMATION (continued)

SARA 313 INFORMATION:

SARA requires submission of annual reports of release of toxic chemicals that appear in 40 CFR 372. This information must be included in all MSDS that are copied and distributed for this material.

Components present in this product at a level that could require reporting under the statute are: None

SECTION 16 - OTHER INFORMATION

HAZARD RATING:

| | | |
|------------|---|--------------|
| HEALTH | 1 | 0 - LEAST |
| FIRE | 0 | 1 - SLIGHT |
| REACTIVITY | 0 | 2 - MODERATE |
| OTHER | - | 3 - HIGH |
| | | 4 - EXTREME |

HAZARD RATING METHOD: NFPA

REASON FOR REVISION:

Reviewed and updated. Changed format to meet new ANSI Standard.

The product information contained herein is believed to be accurate as of the date of the Material Safety Data Sheet, and is provided without warranty, expressed or implied, as to the results of use of this information or the product to which it relates. Recipient assumes all responsibility for the use of this information and the use (alone or in combination with any other product), storage or disposal of the product, including any resultant personal injury or property damage.

END OF REPORT

MATERIAL SAFETY DATA SHEET



1 CHEMICAL PRODUCT & COMPANY IDENTIFICATION

Trade Name **ACIDULATED GLYCERINE**
Manufacturer Stepan Company
22 West Frontage Road
Northfield, IL 60093 USA

Telephone Numbers - 24 Hour Emergency Assistance
Medical 800-228-5635
Chemtrec 800-424-9300
Chemtrec Int'l 703-527-3887

Telephone Numbers - General Assistance
General (847) 446-7500

Product Class Polyol
Product Number 0791

2 HAZARDS IDENTIFICATION

Emergency Overview

Caution! Combustible

May cause irritation to the eyes, skin, and respiratory system.

Health Effects: Eyes

This product may cause irritation to the eyes.

Health Effects: Skin

Prolonged and/or repeated skin contact may result in mild irritation or redness.

Health Effects: Inhalation

Inhalation of vapors or mists of the product may be irritating to the respiratory system. Excessive inhalation of this material causes headache, dizziness, nausea and loss of motor skills.

Health Effects: Ingestion

Ingestion of large amounts may produce gastrointestinal disturbances including irritation, nausea, and diarrhea.

3 COMPOSITION / INFORMATION ON INGREDIENTS

| Ingredient Name | CAS Number | Percent |
|-----------------|------------|---------|
| _Glycerin | 56-81-5 | 88 % |
| _Methanol | 67-56-1 | 1 % |

4 FIRST AID MEASURES

Eyes

Immediately flush eyes with water for at least 15 minutes while holding eyelids open. If irritation persists get medical attention.

Skin

For skin contact flush with large amounts of water. If irritation persists, get medical attention. Immediately take off all contaminated clothing. Wash contaminated clothing before reuse.

Inhalation

If symptoms are experienced, remove source of contamination or move victim to fresh air. If symptoms persist, get medical attention. If the affected person is not breathing, apply artificial respiration. If breathing is difficult, give oxygen. Seek medical attention.

Ingestion

If ingestion of a large amount does occur, seek medical attention. Do not induce vomiting.

5 FIRE FIGHTING MEASURES

Flash Point (65.5 °C), 149.9 F

Extinguishing Media

Dry chemical, foam, carbon dioxide, water fog.

Fire Fighting Equipment / Instructions

Firefighters should wear full fire-fighting turn-out gear (full Bunker gear) including NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

6 ACCIDENTAL RELEASE MEASURES

SPILL AND LEAK PROCEDURES

Emergency Action:

Isolate spill or leak area immediately. Keep unauthorized personnel away. Stay upwind. Keep out of low areas. Ventilate closed spaces before entering.

Do not touch or walk through spilled material. Stop leak if you can do it without risk. Wear appropriate personal protective equipment during cleanup. Eliminate all ignition sources (no smoking, flares, sparks or flames in immediate area). Small Spills: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Use clean non-sparking tools to collect absorbed material. Large Spills: Dike ahead of liquid spill for later disposal. Prevent entry into waterways, sewers, basements or confined areas.

Surfaces may become slippery after spillage.

7 HANDLING & STORAGE

Handling Procedures

Wash thoroughly after handling. As with all chemicals, good industrial hygiene practices should be followed when handling this material.

Storage Procedures

Do not handle or store near an open flame, heat or other sources of ignition. Vent container carefully, as needed to relieve pressure. Store in a dry, well-ventilated area.

8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls

Provide adequate local exhaust ventilation to maintain worker exposure below exposure limits. Local exhaust is suggested for use, where possible, in enclosed or confined spaces.

Personal Protective Equipment: Eyes/Face

Wear chemical goggles; face shield (if splashing is possible).

Personal Protective Equipment: Skin

Wear suitable protective clothing. Use impervious gloves.

Personal Protective Equipment: Respiratory

If vapors are present or irritation is experienced, NIOSH approved respiratory protection for organic vapors should be worn.

Personal Protective Equipment: General

Eye wash fountain and emergency showers are recommended.

Methanol

67-56-1

ACGIH - Threshold Limits Values - Short Term Exposure Limits (TLV-STEL) 250 ppm STEL

Glycerin

56-81-5

ACGIH - Threshold Limits Values - Time Weighted Averages (TLV-TWA) 10 mg/m3 TWA

Methanol

67-56-1

ACGIH - Threshold Limits Values - Time Weighted Averages (TLV-TWA) 200 ppm TWA

Mexico - Occupational Exposure Limits - STELs 250 ppm STEL; 310 mg/m3 STEL

Mexico - Occupational Exposure Limits - TWAs 200 ppm TWA; 260 mg/m3 TWA

Glycerin

56-81-5

Mexico - Occupational Exposure Limits - TWAs 10 mg/m3 TWA

Methanol

67-56-1

NIOSH - Health Standards - Exposure Limits 200 ppm TWA (skin); 260 mg/m3 TWA (skin); 250 ppm STEL (skin); 325 mg/m3 STEL (skin)

NIOSH - Health Standards - Health Effects and Precautions Blindness, metabolic acidosis

NIOSH - Pocket Guide - IDLHs (Immediately Dangerous to Life or Health) 6000 ppm IDLH

NIOSH - Pocket Guide - STELs 250 ppm STEL; 325 mg/m3 STEL

NIOSH - Pocket Guide - Target Organs skin, eyes, CNS, GI tract, respiratory system

Glycerin

56-81-5

NIOSH - Pocket Guide - Target Organs respiratory system, skin, eyes, kidneys

Methanol

67-56-1

NIOSH - Pocket Guide - TWAs 200 ppm TWA; 260 mg/m3 TWA

U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs) 200 ppm TWA; 260 mg/m3 TWA

U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)

15 mg/m³ TWA (total); 5 mg/m³ TWA (respirable fraction)

9 PHYSICAL & CHEMICAL PROPERTIES

| | |
|-------------------------|------------------------------------|
| Flash Point | (65.5 °C), 149.9 F |
| Boiling Point | (93.9 °C), 201 F |
| Specific Gravity | (10.5 lb/gal), 1.262 g/ml |
| Percent Volatile | 1 % (w/w)(Methanol) |
| Vapor Pressure | Not Determined or Unknown |
| Vapor Density | Estimated heavier than air. |
| Evaporation Rate | Estimated slower than ethyl ether. |
| RVOC | 1 % |
| pH Value | Not Applicable |

10 STABILITY & REACTIVITY

Chemical Stability

Stable under normal conditions.

Incompatibility

This product may react with strong oxidizing agents.

Hazardous Decomposition

Upon decomposition, this product may yield oxides of nitrogen and ammonia. Upon decomposition, this product may yield sulfur dioxide and oxides of sulfur.

Hazardous Polymerization

Will not occur.

11 TOXICOLOGICAL INFORMATION

Carcinogenicity

Not available.

_Methanol

67-56-1

Toxicology Data - Selected LD50s and LC50s

Inhalation LC50 Rat: 83.2 mg/L/4H; Inhalation LC50 Rat: 64000 ppm/4H; Oral LD50 Rat: 5628 mg/kg; Dermal LD50 Rabbit: 15800 mg/kg

_Glycerin

56-81-5

Toxicology Data - Selected LD50s and LC50s

Inhalation LC50 Rat: >570 mg/m³/1H; Oral LD50 Rat: 12600 mg/kg; Dermal LD50 Rat: >21900 mg/kg; Dermal LD50 Rabbit: >10 g/kg

12 ECOLOGICAL INFORMATION

Ecotoxicity

No data available on finished product.

13 DISPOSAL CONSIDERATIONS

Disposal Instructions

Treatment, storage, transportation and disposal must be in accordance with applicable Federal, State/Provincial and Local regulations. Regulations may vary in different locations. Characterization and compliance with applicable laws are the responsibility solely of the generator.

14 TRANSPORT INFORMATION

DOT Proper Shipping Name Refer to bill of lading or container label for DOT or other transportation hazard classification, if any.

15 REGULATORY INFORMATION

U.S. Federal Regulations

Methanol

67-56-1

U.S. - CAA (Clean Air Act) - 1990 Hazardous Air Pollutants Present

U.S. - CERCLA/SARA - Section 313 - Emission Reporting 1.0 % de minimis concentration

| Ingredient Name | CAS Number | Percent |
|-----------------|------------|---------|
| <u>Glycerin</u> | 56-81-5 | 88 % |
| <u>Methanol</u> | 67-56-1 | 1 % |

Inventories

All components of this product are listed on the following inventories: U.S.A. (TSCA),

Reportable Quantity (RQ) of this product is 250000 pounds based upon Methanol(67-56-1) which yielded the lowest resultant RQ according to the following formula: CERCLA ingredient RQ / % of that ingredient in the product.

16 OTHER INFORMATION

Disclaimer

Disclaimer: Nothing contained herein grants or extends a license, express or implied, in connection with patents, issued or pending, of the manufacturer or others. The information contained herein is based on the manufacturer's own study and the works of others. The manufacturer makes no warranties, expressed or implied, as to the accuracy, completeness, or adequacy of the information contained herein. The manufacturer shall not be held liable (regardless of fault) to the vendee's employees, or anyone for any direct, special or consequential damages arising out of or in connection with the accuracy, completeness, adequacy or furnishing of such information.

| HAZARD RATINGS | HMIS | NFPA |
|----------------|------|------|
| Health | 1 | 1 |
| Flammability | 2 | 2 |
| Reactivity | 0 | 0 |
| PPE | X | |

Completed On
Completed By

3/22/2007

Replaces Sheet Dated
Product Safety & Compliance

03/23/2001