

G.J. CHEMICAL COMPANY, INC. SAFETY DATA SHEET

1. PRODUCT IDENTIFIER

1.1 PRODUCT NAME:-----> **Dimethylethanolamine**

PRODUCT NUMBER(S):-----> 139000

TRADE NAMES/SYNONYMS:--> ethanol, 2-(dimethylamino) NN-Dimethylaminoethanol, Epoxy Curing Agent S-1, DMEA, DMAE

CAS-No: 108-01-0

CHEMICAL FAMILY: Ethanolamine

1.2 RELEVANT IDENTIFIED USES OF THE SUBSTANCE OR MIXTURE AND USES ADVISED AGAINST

RECOMMENDED USE: Industrial: Use as a reactant, Use as monomer in epoxy, Intermediate, Use in coatings, Use in lubricants, Use in polyurethane synthesis, Manufacture of substances; Curing Agent for Epoxy Resin, Use as additive in fuels, Use in functional fluids, Use in Laboratories.

USES ADVISED AGAINST: No information available

1.3 DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET

Company: **G.J. CHEMICAL CO., INC.**

Address: **40 VERONICA AVENUE
SOMERSET, NJ 08873**

Telephone: **1-973-589-1450**

Fax: **1-973-589-3072**

1.4 Emergency Telephone Number

Emergency Phone: **1-800-424-9300 (CHEMTREC)**

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29CFR 1910 (OSHA HCS)

Flammable liquids (Category 3), H226

Acute toxicity, Oral (Category 4), H302

Acute toxicity, Inhalation (Category 3), H331

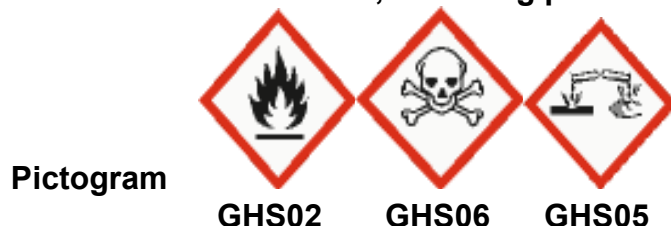
Acute toxicity, Dermal (Category 4), H312

Skin corrosion (Category 1B), H314

Serious eye damage (Category 1), H318

Acute aquatic toxicity (Category 3), H402

2.2 GHS Label elements, including precautionary statements



Signal word **DANGER**

Hazard statement(s)

H226 Flammable liquid and vapor.

H302 + H312 Harmful if swallowed or in contact with skin

H314 Causes severe skin burns and eye damage.

H318 Causes serious eye damage.

H331 Toxic if inhaled.

H402 Harmful to aquatic life.

Precautionary statement(s)

Prevention:

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

P233 Keep container tightly closed.

P240 Ground/bond container and receiving equipment.

P241 Use explosion-proof electrical/ ventilating/ lighting/ equipment.

P242 Use only non-sparking tools.

P243 Take precautionary measures against static discharge.

P261 Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.

P264 Wash skin thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P271 Use only outdoors or in a well-ventilated area.

P273 Avoid release to the environment.

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:

P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell. Rinse mouth.

P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P303 + P361 + P353 IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.

P304 + P340 + P310 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/ physician.

P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/ physician.

P363 Wash contaminated clothing before reuse.

P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.

Storage:

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.

P403 + P235 Store in a well-ventilated place. Keep cool.

P405 Store locked up.

Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS:
Lachrymator.

3. INGREDIENTS

3.1 SUBSTANCE:

Ingredient	CAS No.	% by WT. Range	CLASSIFICATION
Dimethylethanolamine	108-01-0	99	Flammable liquids (Category 3), H226
EC-No. 203-542-8			Acute toxicity, Oral (Category 4), H302
Index-No. 603-047-00-0			Acute toxicity, Inhalation (Category 3), H331
Reg.-No. 01-2119492298-24-XXXX			Acute toxicity, Dermal (Category 4), H312
			Skin corrosion (Category 1B), H314
			Serious eye damage (Category 1), H318
			Acute aquatic toxicity (Category 3), H402

3.2 MIXTURE: Not applicable

4. FIRST-AID MEASURES

4.1 DESCRIPTION OF FIRST AID MEASURES:

INHALATION: DIMETHYLETHANOLAMINE

****FIRST AID- Remove from exposure area to fresh air immediately. If breathing has stopped, perform artificial respiration. If breathing is difficult if necessary give oxygen. Keep person warm and at rest. Treat symptomatically and supportively. Get medical attention**

immediately.

SKIN CONTACT: DIMETHYLETHANOLAMINE

****FIRST AID-** Immediately remove contaminated clothing. Use a safety shower flush skin thoroughly for 15 minutes. Wash affected area with soap and water. For chemical burns cover area with sterile, dry dressing bandage securely, but not too tight. Consult a physician if irritation persists.

EYE CONTACT: DIMETHYLETHANOLAMINE

****FIRST AID-** Wash eyes immediately with large amounts of water or normal saline, occasionally lifting upper and lower lids, until no evidence of chemical remains (approximately 15-20 minutes). Remove contact lenses, if worn, after initial flush. Do not attempt to neutralize with chemical agents. Get medical attention immediately.

INGESTION: DIMETHYLETHANOLAMINE

****FIRST AID-** Do not induce vomiting. If victim is conscious and can swallow immediately give two glasses (16oz) of water. Never give anything by mouth to an unconscious person. Get medical attention immediately.

4.2 MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED INGESTION:

Eye: Corrosive with symptoms of burning, redness, pain, blurred vision, and edema. Severe eye damage can cause blindness. May produce temporary and reversible hazy or blurred vision.

Skin: Corrosive with symptoms of burning, pain, scarring, and reddening; Blister formation and possible tissue destruction.

Inhalation: Severe irritation of the respiratory tract (Coughing and tightness of chest) and acute nervous system depression characterized by headache, dizziness, staggering gait, confusion, unconsciousness or coma. May result in Cyanosis (blue discoloration of the skin or lips)

Ingestion: Causes burning of the mouth, throat and stomach with abdominal and chest pain. Severe irritation, nausea, vomiting, abdominal spasms, and restlessness.

Chronic:

Eye: Repeated or prolonged exposure may result in conjunctivitis:

Skin: Repeated or prolonged exposure may result in dermatitis:

Inhalation: May cause lung damage. May cause ulcerative changes in the mouth and gastrointestinal disturbances.

Ingestion: Prolonged and repeated exposure may damage the liver and kidneys.
Medical Conditions Aggravated by Exposure: Overexposure to vapor, dust or mist may aggravate existing respiratory conditions, such as asthma and bronchitis. Skin contact may aggravate an existing dermatitis.

4.3 INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED:

Note to Physician: Lung damage may be evidenced by shortness of breath, especially on exertion, and may be accompanied by chronic cough. Skin sensitization may be evidenced by rashes, especially hives.

5. FIRE FIGHTING MEASURES

Flash Point: 39°C (102°F) TCC	LEL %:1.4 (V)
Auto-ignition Temperature: 230°C (446°F)	UEL %:12.2 (V)

5.1 SUITABLE EXTINGUISHING MEDIA: Foam--> x CO2--> x Dry Chemical-->
x Water-fog--> x Other-->

Unsuitable extinguishing media: Do not use waterjet.

5.2 SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR

MIXTURE: Keep containers tightly closed. Flammable liquid; isolate from all sources of ignition. During a fire potentially toxic/irritating fumes from combustion/decomposition products may be generated. Decontaminate or discard any clothing that may contain chemical residues.

CONDITIONS OF FLAMMABILITY: Flammable in the presence of a source of ignition when the temperature is above the flash point.

HAZARDOUS COMBUSTION PRODUCTS: Highly dependent on combustion conditions. A complex mixture of airborne solids, liquids, and gases including carbon monoxide, carbon dioxide, carbon oxides, nitrogen oxides and other unidentified organic compounds evolve when this material undergoes combustion.

5.3 ADVICE FOR FIREFIGHTERS: Shut off source. Isolate hazard area and deny entry. Move container from fire area if you can do it without risk. Water fog may be used to cool closed containers to prevent pressure build up and possible auto-ignition or explosion when exposed to extreme heat. Cool containers with water-fog from as far a distance as possible. Water-fog may cause frothing, which can be violent, if sprayed into containers of hot or burning liquid. Withdraw immediately in case of rising sound from venting safety device or any discoloration of tank due to fire. Wear NIOSH/MSHA approved self-contained

breathing apparatus (SCBA) for confined spaces and where there is exposure to vapors. Use full fire-fighting protective clothing. If protective equipment is not available or not used, fight fire from a protected location or safe distance.

6. ACCIDENTAL RELEASE MEASURES

6.1 PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES: Flammable Liquid; Eliminate ignition sources in the vicinity of the spill or released vapor. Immediately evacuate all nonessential people. Verify that responders are properly trained and wearing appropriate respiratory equipment and fire resistant protective clothing during cleanup operations.

6.2 ENVIRONMENTAL PRECAUTIONS:

Keep out of water sources, drains and sewers. Do not flush into surface water or sanitary sewer system

6.3 METHODS AND MATERIAL FOR CONTAINMENT AND CLEANING UP:

Methods for cleanup and containment:

Use explosion proof equipment and equipment that can withstand the corrosive nature of this product. Shut off valves, contain spill, keep out of water sources and sewers, for smaller spills add non-flammable absorbent in spill area. For large spills use foam on spill to minimize vapors clean up by vacuuming then using non-flammable absorbent.

Methods for disposal:

Place all saturated absorbent, using non-sparking tools, in an approved container for disposal. Minimize breathing vapors and skin contact, ventilate confined areas, open all windows and doors, assure conformity with applicable government regulations.

REPORTABLE QUANTITY (RQ): 100lbs.

The Superfund Amendments and Reauthorization Act (SARA) Section 304 requires that a release equal to or greater than the reportable quantity for this substance be immediately reported to the local emergency planning committee and the state emergency response commission (40 CFR 355.40). If the release of this substance is reportable under CERCLA Section 103, the national response center must be notified immediately at (800) 424-8882 or (202) 426-2675 in the metropolitan Washington, D. C. area (40 CFR 302.6).

6.4 REFERENCE TO OTHER SECTIONS: See Sections 8 and 13.

7. HANDLING AND STORAGE

7.1 PRECAUTIONS FOR SAFE HANDLING: This material presents a fire hazard. Invisible vapor spreads easily and can be set on fire by many sources, such as

pilot lights, welding equipment, and electrical motors and switches. Vapor is heavier than air and can travel considerable distance to a source of ignition and flash back. Avoid breathing vapors in top of shipping container. Use with adequate ventilation. Avoid contact with eyes, skin and clothing. Avoid work practices that may release volatile components in the atmosphere. Avoid contaminating soil or releasing material into sewage and drainage systems. Use non-sparking tools to open or close containers.

Advice on general occupational hygiene:

Wash hands before breaks and after work. Keep away from food, drink and animal feeding stuffs. When using do not smoke.

STATIC HAZARD: Electrostatic charge may accumulate and create a hazardous condition when handling this material. To minimize this hazard, bonding and grounding may be necessary but may not be sufficient. For more information refer to OSHA Standard 29CFR 1910.106 “Flammable and Combustible Liquids” and National Fire Protection Association (NFPA 77) “Recommended Practice on Static Electricity”.

7.2 CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES:

Follow maximum allowed pile heights specified in the BOCA codes or the NFPA manual. Local fire authorities should be notified for storage of this material in any quantity. Local permits are required for storage in warehouse quantities. Recommended storage temperature: 15 - 25°C. Store large quantities only in cool, dry areas in buildings designed to comply with OSHA 1910.106. Keep containers tight and upright to prevent leakage. Do not contact with oxidizing materials. Keep containers closed when not in use. Do not take internally. Store away from incompatible materials. Do not store in direct sunlight.

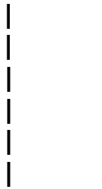
CONTAINER WARNINGS: Containers should be Bonded and Grounded when pouring. Avoid free fall of liquid in excess of a few inches. Empty containers release residue and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, or expose such containers to heat, sparks, static electricity or other sources of ignition. Do not attempt to clean. "Empty" drums should be completely drained, properly banded and promptly returned to a drum re-conditioner.

7.3 SPECIFIC END USES: Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

8. EXPOSURE CONTROL (PERSONAL PROTECTION)

8.1 CONTROL PARAMETERS:

Ingredient	CAS No.	% by WT. Range	Exposure Limits
Dimethylethanolamine	108-01-0 EC-No. 203-542-8	99	N.E. (ACGIH) N.E. (NIOSH)



Key: (PEL) = Permissible Exposure Limit OSHA
(TLV) = Threshold Limit Value OSHA & ACGIH
(STEL) = Short Term Exposure Limit ACGIH
(WEEL) = USA. Workplace Environmental Exposure Levels
(TWA) = Time Weighted Average
CAS = Chemical Abstracts Registry Number
IDLH = Immediate Danger to Life and Health
N.E. =None Established

8.2 EXPOSURE CONTROLS

EXPOSURE GUIDELINES: Consider the potential hazards of this material (Section 2), applicable exposure limits, job activities, and other substances in the work place when designing engineering controls and selecting personal protective equipment. If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, the personal protective equipment listed below is recommended.

ENGINEERING CONTROLS: Provide general dilution or local exhaust ventilation in volume and pattern to keep concentrations within permitted exposure limits. All areas should be ventilated in accordance with OSHA Regulation 29 CFR Part 1910. Explosion proof motors should be used in mechanical ventilation.

RESPIRATORY PROTECTION: The specific respirator selected must be based on contamination levels found in the work place, must not exceed the working limits of the respirator and be jointly approved by the National Institute for Occupational Safety and Health and the Mine Safety and Health Administration (NIOSH-MSHA):

For vapor concentrations up to 250ppm, an air purifying NIOSH/MSHA approved respirator with full face-piece and organic vapor cartridges. For concentrations over 250ppm or in confined areas use a NIOSH/MSHA approved positive pressure full face-piece supplied air respirator (SCBA).

BODY CLOTHING: Employee must wear appropriate protective (impervious) clothing and equipment to prevent repeated or prolonged contact with this substance. Use chemical resistant apron or other impervious clothing. Remove and wash contaminated clothing before reuse.

SKIN PROTECTION: Employee must wear appropriate protective gloves to prevent contact with this substance.

Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0.2 mm

Break through time: 47 min

HYGIENE: Use good personal hygiene practices, wash hands before eating, drinking, smoking or using toilet facilities.

EYE/FACE PROTECTION: Use safety eyewear with splash-guards or face shield. Contact lenses should not be worn.

Emergency shower and eyewash should be easily accessible to the work area.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES:

Dimethylethanolamine 108-01-0

Appearance-----> Liquid
Color-----> Light yellow
Odor-----> Strong amine odor.
Odor Threshold-----> No data available
pH-----> 10.5 - 11.0 at 100 g/l at 20°C (68°F)
Molecular Weight-----> 89.14amu
Melting/Freezing Point-----> -69.99°C (-93.98°F)
Boiling Range -----> 134 - 136°C (273 - 277°F)
Specific Gravity-----> 0.886 @20°C (68°F)
Vapor Pressure-----> 6.12 mmHg@20°C (68°F)
Vapor Density (air=1)-----> 3.08
Water Solubility-----> >10%
Partition Coefficient n-Octanol/Water-> log Pow: -0.549 at 23°C (73°F)
Evaporation Rate (Butyl Acetate=1)----> No data available
Flash Point-----> 39 °C (102°F) - closed cup
Upper Flammability Limit-----> 12.2% (V)
Lower Flammability Limit-----> 1.4% (V)
Auto-Ignition Temperature-----> 230 °C (446°F)
Decomposition Temperature-----> No data available
Viscosity-----> No data available
Explosive Properties-----> No data available
Oxidizing Properties-----> No data available

9.2 Other Information-----> No data Available

10. STABILITY AND REACTIVITY INFORMATION

10.1 **REACTIVITY:** No data available.

10.2 **CHEMICAL STABILITY:** Unstable () Stable (X)
Stable under recommended storage conditions.

10.3 **POSSIBILITY OF HAZARDOUS REACTIONS:** No data available

HAZARDOUS POLYMERIZATION: May occur () Will not occur (X)

10.4 **CONDITIONS TO AVOID:** Heat, Sparks, Pilot Lights, Static Electricity, and Open Flame. Exposure to water vapor.

10.5 INCOMPATIBLE MATERIALS:)--> Reacts violently with strong oxidants such as liquid chlorine, oxygen, sodium hypochlorite, inorganic acids e.g. hydrochloric acid, hydrogen peroxide. Copper, Zinc, Iron

10.6 HAZARDOUS DECOMPOSITION PRODUCTS: Toxic levels of ammonia, combustion products Smoke, Carbon Monoxide, Carbon Dioxide, and oxides of nitrogen.

11. TOXICOLOGICAL INFORMATION

11.1 INFORMATION ON TOXICOLOGICAL EFFECTS:

Routes of Entry: Inhalation--> x Skin--> x Ingestion--> x

ACUTE HEALTH EFFECTS:

Effects of overexposure:

Eye> Corrosive with symptoms of burning, redness, pain, blurred vision, and edema.; Severe eye damage can cause blindness. May produce temporary and reversible hazy or blurred vision.

Skin> Corrosive with symptoms of burning, pain, scarring, and reddening; Blister formation and possible tissue destruction.

Inhalation> Severe irritation of the respiratory tract (Coughing and tightness of chest)and acute nervous system depression characterized by headache, dizziness, staggering gait, confusion, unconsciousness or coma. May result in Cyanosis (blue discoloration of the skin or lips)

Ingestion> Causes burning of the mouth, throat and stomach with abdominal and chest pain. Severe irritation, nausea, vomiting, abdominal spasms, and restlessness.

Chronic: Eye> Repeated or prolonged exposure may result in conjunctivitis:

Skin> Repeated or prolonged exposure may result in dermatitis: **Inhalation>** May cause lung damage. May cause ulcerative changes in the mouth and gastrointestinal disturbances: **Ingestion>** Prolonged and repeated exposure may damage the liver and kidneys.

Medical Conditions Aggravated by Exposure> Overexposure to vapor, dust or mist may aggravate existing respiratory conditions, such as asthma and bronchitis. Skin contact may aggravate an existing dermatitis.

ACUTE TOXICITY:

The effects of overexposure shown in Section II are based on acute animal toxicity profiles. Typical values are:

Ingredient	Oral LD50 (Rat)	Skin LD50 (Rabbit)	Inhalation LC50	
Dimethylethanol-amine	1182.7mg/kg	1219mg/kg	1641ppm/4hr	

SKIN CORROSION/IRRITATION: Skin - Rabbit Result: Corrosive - 1 h (OECD Test Guideline 404)

SERIOUS EYE DAMAGE/EYE IRRITATION: Eyes - Rabbit Result: Corrosive (OECD Test Guideline 405)

RESPIRATORY OR SKIN SENSITIZATION: Buehler Test - Guinea pig Result: Does not cause skin sensitization

MUTAGENIC EFFECTS: Hamster ovary Result: negative; Mouse - male and female Result: negative.

CARCINOGEN STATUS: IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

REPRODUCTIVE TOXICITY: No data available

Specific target organ toxicity (STOT-SE)- single exposure (Globally Harmonized System): no data available

Specific target organ toxicity (STOT-RE) - repeated exposure (Globally Harmonized System): no data available

ASPIRATION HAZARD: No data available

11.2 ADDITIONAL INFORMATION: Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin, cough, Shortness of breath, Headache, Nausea

12. ECOLOGICAL INFORMATION

12.1 AQUATIC TOXICITY (Acute):

Toxicity to fish:

LC50 - Leuciscus idus (Golden orfe) - > 100 - 220 mg/l - 96 h

LC50 - Leuciscus idus (Golden orfe) - 146.63 mg/l - 96 h Static test

Toxicity to daphnia and other aquatic invertebrates:

EC50 - Daphnia magna (Water flea) - 98.37 mg/l - 48 h Static Test

Toxicity to algae:

EC50 Desmodesmus subspicatus (Scenedesmus subspicatus)- 66.08 mg/l –

EC-50 Freshwater Algae Daphnia 48-hr: 98.37mg/l

EC-50 Algae 72hr: 35mg/l

LC-50 Bacteria 17 hr : >8000mg/l

12.2 PERSISTENCE AND DEGRADABILITY: Aerobic - Exposure time 14 d

Result: 60.5 % - Readily biodegradable.

(OECD Test Guideline 301C)

12.3 BIOACCUMULATIVE POTENTIAL: No data available

Bio-concentration Factor (BCF): No data available.

12.4 MOBILITY IN SOIL: No data available

12.5 RESULTS OF PBT AND vPvB:

PBT assessment results: This substance is not classified as PBT or vPvB.

12.6 OTHER ADVERSE EFFECTS: Harmful to aquatic life.

13. DISPOSAL CONSIDERATIONS

13.1 WASTE TREATMENT METHODS: Hazard characteristic and regulatory waste stream classification can change with product use. Accordingly it is the responsibility of the user to determine the proper storage, transportation, treatment, and or disposal methodologies for spent materials and residues at time of disposition. Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. .Dispose in accordance with all applicable disposal regulations. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

CONTAMINATED PACKAGING: Dispose of as unused product

The information offered here is for the product as shipped. Use and/or alterations to the product such as mixing with other materials may significantly change the characteristics of the material and alter the RCRA classification and

the proper disposal method.

RCRA: The unused product is a RCRA hazardous waste if discarded. The RCRA ID number is: D001

If the waste is a spent solvent, the appropriate spent solvent code should be used.

DISPOSAL MUST BE IN ACCORDANCE WITH STANDARDS APPLICABLE TO GENERATORS OF HAZARDOUS WASTE, 48 CFR 262

14. TRANSPORT INFORMATION

Land Transport (DOT)

- 14.1 USDOT ID Number-----> UN2051**
- 14.2 USDOT Shipping Name-----> 2-Dimethylaminoethanol**
- 14.3 USDOT Hazard Classification-----> 8 (Corrosive Liquid)**
 - USDOT Label Codes-----> 8, 3 (Corrosive, Flammable) (Sub risk)**
- 14.4 USDOT Package Code-----> II**
- 14.5 Marine Pollutant-----> No**
- 14.6 Special precautions for user-----> Yes**
 - Emergency Response Guide-----> 132**
 - Reportable Quantity-----> 100lbs.**

Sea Transport (IMDG)

- 14.1 ID Number-----> UN2051**
- 14.2 Proper shipping name-----> 2-DIMETHYLAMINOETHANOL**
- 14.3 Hazard Classification-----> 8, 3 (Corrosive Flammable Liquid)**
 - Label Codes-----> 8, 3 (Corrosive, Flammable)**
- 14.4 Package Code-----> II**
- 14.5 Marine Pollutant-----> No**
- 14.6 Special precautions for user-----> Yes**
 - EMS-Number-----> F-E, S-C**

Air Transport (IATA)

- 14.1 ID Number-----> UN2051**
- 14.2 Proper shipping name-----> 2-Dimethylaminoethanol**
- 14.3 Hazard Classification-----> 8, 3 (Corrosive, Flammable Liquid)**
 - Label Codes-----> 8, 3 (Corrosive, Flammable)**
- 14.4 Package Code-----> II**
- 14.5 Environmental hazard-----> None**
- 14.6 Special precautions for user-----> Yes**

15. REGULATORY INFORMATION

15.1 SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS/LEGISLATION SPECIFIC FOR THE SUBSTANCE OR MIXTURE:

SARA TITLE III (Superfund Amendment and Reauthorization Act)

SECTION 302 AND 304: Extremely Hazardous Substance List (40 CFR 355) - Not Listed

SECTION 313: Toxic Chemicals Listing (40 CFR 372.65) - Not Listed

SECTION 311/312: Hazard Categorization (40 CFR 370) - Acute Health Hazard, Chronic Health Hazard, Fire Hazard

CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act)

SECTION 102(A) Hazardous Substances (40 CFR 302.4) - Listed

Reportable Quantity – 100lbs

SECTION 101(14) Reportable Quantity: 100lbs.

Massachusetts Right to Know Components

2-Dimethylaminoethanol CAS-No. 108-01-0

Pennsylvania Right to Know Components

2-Dimethylaminoethanol CAS-No. 108-01-0

New Jersey Right to Know Components

2-Dimethylaminoethanol CAS-No. 108-01-0

California Prop. 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

TSCA (Toxic Substance Control Act)

2-Dimethylaminoethanol CAS-No. 108-01-0 is listed on the TSCA Inventory.

International Inventories:

<u>Country or Region</u>	<u>Inventory Name</u>	<u>On inventory yes/no</u>
<u>Australia</u>	Australian Inventory of Chemical Substances (AICS)	Yes
<u>Canada</u>	Domestic Substances List (DSL)	Yes
<u>Canada</u>	Non-Domestic Substances List (NDSL)	No
<u>China</u>	Inventory of Existing Chemical Substances in China (IECSC)	Yes
<u>Europe</u>	European Inventory of Existing Commercial Chemicals	Yes

	Substances (EINECS)	
<u>Europe</u>	European List of Notified Chemical Substances (ELINCS)	No
<u>Japan</u>	Inventory of Existing and New Chemical Substances (ENCS)	Yes
<u>Japan</u>	Industrial Safety & Health Law Inventory (ISHL)	Yes
<u>Korea</u>	Existing Chemicals List (ECL)	Yes
<u>Mexico</u>	National Inventory of Chemical Substances (INSQ)	Yes
<u>New Zealand</u>	New Zealand Inventory	Yes
<u>Philippines</u>	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
<u>Switzerland</u>	Inventory of Notified New Substances (CHINV)	Yes
<u>Taiwan</u>	National Existing Chemical Inventory (NECI)	Yes
<u>United States & Puerto Rico</u>	Toxic Substances Control Act Inventory	Yes

15.2 CHEMICAL SAFETY ASSESSMENT: A chemical safety assessment has been carried out for this substance.

16. OTHER INFORMATION:

HMIS (Hazardous Materials Identification System)

Hazard Rating:

4-Extreme

3-High

2-Moderate

1-Slight

0-Insignificant

NFPA RATINGS (SCALE 0-4): **Health=3** **Fire=2** **Reactivity=0**
HMIS RATINGS (SCALE 0-4): **Health=3** **Fire=2** **Reactivity=0** **PPE=H**

Hazard statement(s) from Section 2 and 3:

H226 Flammable liquid and vapor.

H302 + H312 Harmful if swallowed or in contact with skin

H314 Causes severe skin burns and eye damage.

H318 Causes serious eye damage.

H331 Toxic if inhaled.

H402 Harmful to aquatic life.

Date of preparation-----> November 7, 2013

Revision Number-----> 1.6

Revision Content-----> Updated sections: 1, 3, 5, 6, 8, 10, 14, and 16.

Revision Date-----> January 21, 2019

Prepared by-----> T.G. Fenstermaker Jr.

Acronyms:

ACGIH - American Conference of Governmental Industrial Hygienists
 AIHA - American Industrial Hygiene Association

ANSI	-	American Nation Standards Institute
API	-	American Petroleum Institute
CERCLA	-	Comprehensive Emergency Response, Compensation, and Liability Act
DOT	-	U.S. Department of Transportation
EPA	-	U.S. Environmental Protection Agency
HMIS	-	Hazardous Materials Information System
IARC	-	International Agency For Research On Cancer
MSHA	-	Mine Safety and Health Administration
NFPA	-	National Fire Protection Association
NIOSH	-	National Institute of Occupational Safety and Health
NOIC	-	Notice of Intended Change (Proposed change to ACGIH TLV)
NTP	-	National Toxicology Program
OPA	-	Oil Pollution Act of 1990
OSHA	-	U.S. Occupational Safety & Health Administration
PEL	-	Permissible Exposure Limit (OSHA)
RCRA	-	Resource Conservation and Recovery Act
REL	-	Recommended Exposure Limit (NIOSH)
SARA	-	Superfund Amendments and Reauthorization Act of 1986 Title III
SCBA	-	Self-Contained Breathing Apparatus
STEL	-	Short-Term Exposure Limit (generally 15 minutes)
TLV	-	Threshold Limit Value
TSCA	-	Toxic Substances Control Act
TWA	-	Time Weighted Average (8hr.)
WHMIS	-	Canadian Workplace Hazardous Materials Information System

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