

### Section 1: Product and Company Identification

#### Middlesex Gases & Technologies

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Product Code: Trimethylamine

### Section 2: Hazards Identification



**Danger**

#### Hazard Classification:

Eye Effects (Category 1)  
Flammable (Category 1)  
Gases Under Pressure  
Specific target organ toxicity (Single Exposure) (Category 3)

#### Hazard Statements:

Causes serious eye damage  
Contains gas under pressure; may explode if heated  
Extremely flammable gas  
May cause respiratory irritation;

#### Precautionary Statements

##### Prevention:

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.  
Use only outdoors or in a well-ventilated area.  
Wear eye protection/face protection.  
Avoid breathing dust/fume/gas/mist/ vapors/spray.  
[In case of inadequate ventilation] wear respiratory protection.

##### Response:

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
If inhaled: Remove person to fresh air and keep comfortable for breathing.  
Eliminate all ignition sources if safe to do so.  
Leaking gas fire: Do not extinguish, unless leak can be stopped safely.  
Call a poison center or doctor if you feel unwell.

**Storage:**

Store locked up.

Protect from sunlight.

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

**Disposal:**

Dispose of contents and/or container in accordance with applicable regulations.

**Section 3: Composition/Information on Ingredients**

<b>CAS #</b>
75-50-3

Chemical Substance	Chemical Family	Trade Names
TRIMETHYLAMINE	amines, aliphatic	N,N-DIMETHYLMETHANAMINE; N,N-DIMETHYL METHANAMINE; N,NDIMETHYL, METHYLAMINE; METHANAMINE, N,N-DIMETHYL-; TRIMETHYLAMINE, ANHYDROUS; N-TRIMETHYLAMINE; TMA; UN 1083; C3H9N

**Section 4: First Aid Measures**

Skin Contact	Eye Contact	Ingestion	Inhalation	Note to Physicians
Wash skin with soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention, if needed. Thoroughly clean and dry contaminated clothing before reuse. Destroy contaminated shoes.	Immediately flush eyes with plenty of water for at least 15 minutes. Then get immediate medical attention.	If swallowed, drink plenty of water, DO NOT induce vomiting. Get immediate medical attention.	If adverse effects occur, remove to uncontaminated area. Give artificial respiration if not breathing. If breathing is difficult, oxygen should be administered by qualified personnel. Get immediate medical attention.	For inhalation, consider oxygen. Avoid gastric lavage or emesis.

**Section 5: Fire Fighting Measures**

Suitable Extinguishing Media	Products of Combustion	Protection of Firefighters
Regular dry chemical Large fires: Use regular foam or flood with fine water spray. avoid carbon dioxide	Ammonia, oxides of carbon, oxides of nitrogen	<ul style="list-style-type: none"> <li>▪ Any self-contained breathing apparatus with a full facepiece. Use a chemical protective suit.</li> <li>▪ Any self-contained breathing apparatus with a full facepiece. Use a chemical protective suit.</li> </ul>

**Section 6: Accidental Release Measures**

Personal Precautions	Environmental Precautions	Methods for Containment
Keep unnecessary people away, isolate hazard area and deny entry.	Avoid heat, flames, sparks and other sources of ignition.	Stop leak if possible without personal risk. Reduce vapors with water spray. Remove sources of ignition. Dig holding area such as lagoon, pond or pit for containment. Trap spilled material at bottom in deep water pockets, excavated holding areas or within sand bag barriers.

Methods for Cleanup	Other Information

Methods for Cleanup	Other Information
Collect runoff for disposal as potential hazardous waste. Dike for later disposal. Absorb with sand or other non-combustible material. Add an alkaline material (lime, crushed limestone, sodium bicarbonate, or soda ash). Apply detergents, soaps, alcohols or another surface active agent. Absorb with activated carbon. Collect spilled material using mechanical equipment.	Notify Local Emergency Planning Committee and State Emergency Response Commission for release greater than or equal to RQ (U.S. SARA Section 304). If release occurs in the U.S. and is reportable under ERCLA Section 103, notify the National Response Center at (800)424-8802 (USA) or (202)426-2675 (USA).

## Section 7: Handling and Storage

Handling	Storage
Store and handle in accordance with all current regulations and standards. Store below 52 C. Store in a cool, dry place. Store in a well-ventilated area. Store outside or in a detached building. Avoid contact with water or moisture. Subject to storage regulations: U.S OSHA 29 CFR 1910.101.	Protect from physical damage. Keep separated from incompatible substances.

## Section 8: Exposure Controls/Personal Protection

Exposure Guidelines
TRIMETHYLAMINE: 10 ppm (24 mg/m <sup>3</sup> ) OSHA TWA (vacated by 58 FR 35338, June 30, 1993) 15 ppm (36 mg/m <sup>3</sup> ) OSHA STEL (vacated by 58 FR 35338, June 30, 1993) 5 ppm ACGIH TWA 15 ppm ACGIH STEL 10 ppm (24 mg/m <sup>3</sup> ) NIOSH recommended TWA 10 hour(s) 15 ppm (36 mg/m <sup>3</sup> ) NOISH recommended STEL 1 ppm AIHA WEEL recommended TWA

### Engineering Controls

Handle only in fully enclosed systems.

Eye Protection	Skin Protection	Respiratory Protection
Wear splash resistant safety goggles with a face shield. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.	Wear appropriate chemical resistant clothing.	Any self-contained breathing apparatus with a full facepiece. Use a chemical protective suit.

### General Hygiene considerations

- Avoid breathing vapor or mist
- Avoid contact with eyes and skin
- Wash thoroughly after handling and before eating or drinking

## Section 9: Physical and Chemical Properties

Physical State	Appearance	Color	Change in Appearance	Physical Form	Odor	Taste
Gas	Clear	Colorless	N/A	Gas	Ammonia odor, fishy odor, pungent odor	Salty taste

Flash Point	Flammability	Partition Coefficient	Autoignition Temperature	Upper Explosive Limits	Lower Explosive Limits
10 F (-12 C) (CC)	Not available	0.16 (log = -0.796)	374 F (190 C)	0.116	0.02

Boiling Point	Freezing Point	Vapor Pressure	Vapor Density	Specific Gravity	Water Solubility	pH	Odor Threshold	Evaporation Rate	Viscosity
25-37 F (-4 to 3 C)	-191 to -179 F (-124 to -117 C)	1.9 atm @ 21.1 C	2.04-2.10 (Air=1)	0.6356-0.6709	41000 mg/100 g @ 19 C	Strongly basic	0.00021 ppm	>1 (butyl acetate=1)	Not available

Molecular Weight	Molecular Formula	Density	Weight per Gallon	Volatility by Volume	Volatility	Solvent Solubility
59.11	(C-H3)3-N	2.592 kg/m <sup>3</sup> @ 21.1 C	5.3 lbs	Not available	Not applicable	Soluble: Alcohol, benzene, chloroform, ethanol, ether, toluene, xylene

## Section 10: Stability and Reactivity

Stability	Conditions to Avoid	Incompatible Materials

Stability	Conditions to Avoid	Incompatible Materials
Stable at normal temperatures and pressure.	Stable at normal temperatures and pressure.	Acids, combustible materials, metals, halogens, halo carbons, oxidizing materials, reducing agents

Hazardous Decomposition Products	Possibility of Hazardous Reactions
Ammonia, oxides of carbon, oxides of nitrogen; in the absence of oxygen: amides, cyanates, cyanogen, hydrogen cyanide, isocyanates, nitriles, nitrogen compounds, oxides of carbon	Will not polymerize.

## Section 11: Toxicology Information

### Acute Effects

Oral LD50	Dermal LD50	Inhalation
500 mg/kg oral-rat LD50	Not available	Burns

Eye Irritation	Skin Irritation	Sensitization
Burns, tearing	Burns, absorption may occur, nausea, headache	Harmful if inhaled, harmful if swallowed, respiratory tract burns, skin burns, mucous membrane burns, tears

### Chronic Effects

Carcinogenicity	Mutagenicity	Reproductive Effects	Developmental Effects
Not available	Not available	Available.	No data

## Section 12: Ecological Information

### Fate and Transport

Eco toxicity	Persistence / Degradability	Bioaccumulation / Accumulation	Mobility in Environment
Fish toxicity: Not available Invertebrate toxicity: 1000000 ug/L 48 hour(s) LC50 (Mortality) Medaka, high-eyes ( <i>Oryzias latipes</i> ) Algal toxicity: 5900 ug/L 96 hour(s) (Physiological) Green algae ( <i>Gloeoetanium loitlesbergerianu</i> ) Phyto toxicity: Not available Other toxicity: May cause pH changes in aqueous ecological systems	Not available	Accumulates very little in the bodies of living organisms.	Leaches through the soil or the sediment at a very rapid rate.

## Section 13: Disposal Considerations

Dispose in accordance with all applicable regulations. Subject to disposal regulations: U.S. EPA 40 CFR 262. Hazardous Waste Number(s): D001.

## Section 14: Transportation Information

### U.S. DOT 49 CFR 172.101

Proper Shipping Name	ID Number	Hazard Class or Division	Packing Group	Labeling Requirements	Passenger Aircraft or Railcar Quantity Limitations	Cargo Aircraft Only Quantity Limitations	Additional Shipping Description
Trimethylamine, anhydrous	UN1083	2.1	Not applicable	2.1	Forbidden	150 kg	N/A

### Canadian Transportation of Dangerous Goods

Shipping Name	UN Number	Class	Packing Group / Risk Group
Trimethylamine, anhydrous	UN1083	2.1	Not applicable

## Section 15: Regulatory Information

### U.S. Regulations

CERCLA Sections	SARA 355.30	SARA 355.40
100 LBS RQ	Not regulated.	Not regulated.

### SARA 370.21

Acute	Chronic	Fire	Reactive	Sudden Release
Yes	No	Yes	No	Yes

### SARA 372.65

Not regulated.

### OSHA Process Safety

Not regulated.

### State Regulations

#### CA Proposition 65

Not regulated.

### Canadian Regulations

#### WHMIS Classification

ABD1E

### National Inventory Status

US Inventory (TSCA)	TSCA 12b Export Notification	Canada Inventory (DSL/NDSL)
Listed on inventory.	Not listed.	Not determined.

## Section 16: Other Information

### NFPA Rating

HEALTH=3 FIRE=4 REACTIVITY=0

0 = minimal hazard, 1 = slight hazard, 2 = moderate hazard, 3 = severe hazard, 4 = extreme hazard