

MATERIAL SAFETY DATA SHEET

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Version 1.6

Section 1 - Product and Company Information

Product Name TRIMETHYLAMINE, ANHYDROUS, 99%
Product Number 243205
Brand ALDRICH

Company Sigma-Aldrich
Address 3050 Spruce Street
SAINT LOUIS MO 63103 US

Technical Phone: 800-325-5832
Fax: 800-325-5052
Emergency Phone: 314-776-6555

Section 2 - Composition/Information on Ingredient

Substance Name	CAS #	SARA 313 No
TRIMETHYLAMINE	75-50-3	No

Formula C3H9N
Synonyms N,N-Dimethylmethanamine * Dimethylmethaneamine *
Trimethylamine (ACGIH)
RTECS Number: PA0350000

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Flammable (USA) Extremely Flammable (EU). Toxic.
Harmful by inhalation. Causes burns. Toxic if swallowed.
Lachrymator.

HMIS RATING

HEALTH: 3
FLAMMABILITY: 4
REACTIVITY: 1

NFPA RATING

HEALTH: 3
FLAMMABILITY: 4
REACTIVITY: 1

For additional information on toxicity, please refer to Section 11.

Section 4 - First Aid Measures

ORAL EXPOSURE

If swallowed, wash out mouth with water provided person is conscious. Call a physician.

INHALATION EXPOSURE

If inhaled, remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen.

DERMAL EXPOSURE

In case of contact, immediately wash skin with soap and copious amounts of water.

EYE EXPOSURE

Contamination of the eyes should be treated by immediate and prolonged irrigation with copious amounts of water. Assure adequate flushing of the eyes by separating the eyelids with fingers.

Section 5 - Fire Fighting Measures

FLAMMABLE HAZARDS

Flammable Hazards: Yes

EXPLOSION HAZARDS

Vapor may travel considerable distance to source of ignition and flash back. Forms explosive mixtures in air. Container explosion may occur under fire conditions.

FLASH POINT

20 °F - 7.0 °C Method: closed cup

EXPLOSION LIMITS

Lower: 2 % Upper: 11.6 %

AUTOIGNITION TEMP

190 °C

FLAMMABILITY

N/A

EXTINGUISHING MEDIA

Suitable: For small (incipient) fires, use media such as "alcohol" foam, dry chemical, or carbon dioxide. For large fires, apply water from as far as possible. Use very large quantities (flooding) of water applied as a mist or spray; solid streams of water may be ineffective. Cool all affected containers with flooding quantities of water.

FIREFIGHTING

Protective Equipment: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.
Specific Hazard(s): Vapor may travel considerable distance to source of ignition and flash back. Emits toxic fumes under fire conditions. Flammable gas.
Specific Method(s) of Fire Fighting: Use water spray to cool fire-exposed containers.

Section 6 - Accidental Release Measures

PROCEDURE TO BE FOLLOWED IN CASE OF LEAK OR SPILL

Evacuate area and keep personnel upwind. Shut off all sources of ignition. Shut off leak if there is no risk.

PROCEDURE(S) OF PERSONAL PRECAUTION(S)

Wear self-contained breathing apparatus, rubber boots, and heavy rubber gloves.

METHODS FOR CLEANING UP

Ventilate area and wash spill site after material pickup is complete.

pH	N/A	
BP/BP Range	3.0 - 4.0 °C	760 mmHg
MP/MP Range	- 117.0 °C	
Freezing Point	N/A	
Vapor Pressure	687.61 mmHg	21 °C
Vapor Density	2.09 g/l	
Saturated Vapor Conc.	N/A	
SG/Density	0.636 g/cm ³	
Bulk Density	N/A	
Odor Threshold	N/A	
Volatile%	N/A	
VOC Content	N/A	
Water Content	N/A	
Solvent Content	N/A	
Evaporation Rate	N/A	
Viscosity	N/A	
Surface Tension	N/A	
Partition Coefficient	N/A	
Decomposition Temp.	N/A	
Flash Point	20 °F - 7.0 °C	Method: closed cup
Explosion Limits	Lower: 2 % Upper: 11.6 %	
Flammability	N/A	
Autoignition Temp	190 °C	
Refractive Index	1.3443	
Optical Rotation	N/A	
Miscellaneous Data	N/A	
Solubility	N/A	

N/A = not available

Section 10 - Stability and Reactivity

STABILITY

Stable: Stable.

Conditions to Avoid: Moisture.

Materials to Avoid: Strong oxidizing agents, Brass, Magnesium, Zinc Copper, Copper alloys Mercury/mercury oxides., Tin/tin oxides

HAZARDOUS DECOMPOSITION PRODUCTS

Hazardous Decomposition Products: Carbon monoxide, carbon dioxide, and nitrogen oxides.

Section 11 - Toxicological Information

ROUTE OF EXPOSURE

Skin Contact: Causes skin irritation.

Skin Absorption: May be harmful if absorbed through the skin.

Eye Contact: Causes severe eye irritation.

Inhalation: Material is irritating to mucous membranes and upper respiratory tract. Harmful if inhaled.

Ingestion: May be harmful if swallowed.

SIGNS AND SYMPTOMS OF EXPOSURE

Conjunctivitis. Symptoms of exposure may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea, and vomiting. Inhalation may result in spasm, inflammation and edema of the larynx and bronchi, chemical pneumonitis, and pulmonary edema. Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin.

TOXICITY DATA

Oral
Rat
500 mg/kg
LD50

Inhalation
Mouse
19,000 mg/m³
LC50

Remarks: Behavioral:Excitement. Behavioral:Somnolence (general depressed activity). Behavioral:Muscle contraction or spasticity.

Intraperitoneal
Mouse
946 MG/KG
LD50

Intravenous
Mouse
90 MG/KG
LD50

Inhalation
Mammal
19,000 mg/m³
LC50

CHRONIC EXPOSURE - TERATOGEN

Species: Mouse
Dose: 2960 MG/KG
Route of Application: Intraperitoneal
Exposure Time: (6-15D PREG)
Result: Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus).

CHRONIC EXPOSURE - REPRODUCTIVE HAZARD

Species: Mouse
Dose: 4430 MG/KG
Route of Application: Intraperitoneal
Exposure Time: (6-15D PREG)
Result: Effects on Fertility: Litter size (e.g.; # fetuses per litter; measured before birth). Effects on Newborn: Physical.

Section 12 - Ecological Information

No data available.

Section 13 - Disposal Considerations

APPROPRIATE METHOD OF DISPOSAL OF SUBSTANCE OR PREPARATION

Contact a licensed professional waste disposal service to dispose of this material. Observe all federal, state, and local environmental regulations.

APPROPRIATE METHOD OF DISPOSAL OF CONTAMINATED PACKAGING

Caution: no-return cylinder. Do not reuse. Empty cylinder will contain hazardous residue. Follow proper disposal techniques.

Section 14 - Transport Information

DOT

Proper Shipping Name: Trimethylamine, anhydrous
UN#: 1083
Class: 2.1
Packing Group: None
Hazard Label: Flammable gas
PIH: Not PIH

IATA

Proper Shipping Name: Trimethylamine, anhydrous
IATA UN Number: 1083
Hazard Class: 2.1
Not Allowed - Aircraft: Cargo aircraft only. Not permitted on passenger aircraft.

Section 15 - Regulatory Information

EU DIRECTIVES CLASSIFICATION

Symbol of Danger: F+-Xn
Indication of Danger: Extremely Flammable. Harmful.
R: 12-20-37/38-41
Risk Statements: Extremely flammable. Harmful by inhalation. Irritating to respiratory system and skin. Risk of serious damage to eyes.
S: 16-26-29
Safety Statements: Keep away from sources of ignition - no smoking. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Do not empty into drains.

US CLASSIFICATION AND LABEL TEXT

Indication of Danger: Flammable (USA) Extremely Flammable (EU). Toxic.
Risk Statements: Harmful by inhalation. Causes burns. Toxic if swallowed.
Safety Statements: Keep away from sources of ignition - no smoking. Do not breath gas. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Do not empty into drains. Wear suitable protective clothing, gloves, and eye/face protection. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
US Statements: Lachrymator.

UNITED STATES REGULATORY INFORMATION

SARA LISTED: No
TSCA INVENTORY ITEM: Yes

CANADA REGULATORY INFORMATION

WHMIS Classification: This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.
DSL: Yes
NDSL: No

Section 16 - Other Information

DISCLAIMER

For R&D use only. Not for drug, household or other uses.

WARRANTY

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Inc., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. Copyright 2008 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.