

## MATERIAL SAFETY DATA SHEET

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Section 1 - Product and Company Information

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Product Name N-METHYL-1,3-PROPANEDIAMINE, 98%  
Product Number 127027  
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

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Section 2 - Composition/Information on Ingredient

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Substance Name	CAS #	SARA 313
3-(METHYLAMINO)PROPYLAMINE	6291-84-5	No

Formula C4H12N2  
Synonyms 3-(Methylamino)propylamine \*  
N-Methyl-1,3-propanediamine \*  
N-Methyltrimethylenediamine

RTECS Number: TX8242500

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Section 3 - Hazards Identification

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EMERGENCY OVERVIEW  
Flammable. Corrosive.  
Causes burns.

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

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Section 4 - First Aid Measures

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## 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.

## EYE EXPOSURE

Assure adequate flushing of the eyes by separating the eyelids with fingers.

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Section 5 - Fire Fighting Measures

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## EXPLOSION HAZARDS

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

FLASH POINT

104 °F 40 °C Method: closed cup

EXPLOSION LIMITS

Lower: 1.8 % Upper: 12.8 %

AUTOIGNITION TEMP

305 °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.

EXPOSURE HAZARD(S)

Material: Corrosive. Harmful liquid and fumes.

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Section 6 - Accidental Release Measures

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PROCEDURE TO BE FOLLOWED IN CASE OF LEAK OR SPILL

Evacuate area. Shut off all sources of ignition.

PROCEDURE(S) OF PERSONAL PRECAUTION(S)

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

METHODS FOR CLEANING UP

Cover with dry-lime, sand, or soda ash. Place in covered containers using non-sparking tools and transport outdoors. Ventilate area and wash spill site after material pickup is complete.

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Section 7 - Handling and Storage

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HANDLING

User Exposure: Do not breathe vapor. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.

STORAGE

Suitable: Keep tightly closed. Keep away from heat, sparks, and open flame. Store in a cool dry place.

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Section 8 - Exposure Controls / PPE

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ENGINEERING CONTROLS

Safety shower and eye bath. Use only in a chemical fume hood.

PERSONAL PROTECTIVE EQUIPMENT

Other: Wear appropriate government approved respirator, chemical-resistant gloves, safety goggles, other protective clothing.

#### GENERAL HYGIENE MEASURES

Wash thoroughly after handling. Wash contaminated clothing before reuse.

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#### Section 9 - Physical/Chemical Properties

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Appearance	Color: Very faintly yellow Form: Clear liquid	
Property	Value	At Temperature or Pressure
Molecular Weight	88.15 AMU	
pH	13.5	20 °C Concentration: 100 g/l
BP/BP Range	138.0 - 140.0 °C	
MP/MP Range	- 72.0 °C	
Freezing Point	N/A	
Vapor Pressure	4 mmHg	20 °C
Vapor Density	N/A	
Saturated Vapor Conc.	N/A	
SG/Density	0.852 g/cm3	
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	0.002 Pas	20 °C
Surface Tension	N/A	
Partition Coefficient	Log Kow: - 0.760	
Decomposition Temp.	N/A	
Flash Point	104 °F 40 °C	Method: closed cup
Explosion Limits	Lower: 1.8 % Upper: 12.8 %	
Flammability	N/A	
Autoignition Temp	305 °C	
Refractive Index	1.448	
Optical Rotation	N/A	
Miscellaneous Data	N/A	
Solubility	Solubility in Water:miscible	

N/A = not available

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#### Section 10 - Stability and Reactivity

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##### STABILITY

Conditions of Instability: Absorbs carbon dioxide from air.

Materials to Avoid: Acids, Acid chlorides, Acid anhydrides, Strong oxidizing agents.

##### HAZARDOUS DECOMPOSITION PRODUCTS

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

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#### Section 11 - Toxicological Information

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##### ROUTE OF EXPOSURE

Skin Contact: Severe irritation or burns.  
Multiple Routes: Harmful if swallowed, inhaled, or absorbed through skin.

#### SIGNS AND SYMPTOMS OF EXPOSURE

Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin. Inhalation may result in spasm, inflammation and edema of the larynx and bronchi, chemical pneumonitis, and pulmonary edema. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. Prolonged contact can cause:

#### TOXICITY DATA

Oral  
Rat  
951 mg/kg  
LD50  
Remarks: Kidney, Ureter, Bladder:Hematuria.

Inhalation  
Rat  
> 189 mg/m<sup>3</sup>  
LC50

Oral  
Mouse  
282 mg/kg  
LD50  
Remarks: Kidney, Ureter, Bladder:Hematuria.

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#### Section 12 - Ecological Information

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No data available.

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#### Section 13 - Disposal Considerations

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#### APPROPRIATE METHOD OF DISPOSAL OF SUBSTANCE OR PREPARATION

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Observe all federal, state, and local environmental regulations.

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#### Section 14 - Transport Information

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##### DOT

Proper Shipping Name: Amines, liquid, corrosive, flammable, n.o.s. [or] Polyamines, liquid, corrosive, flammable, n.o.s.  
UN#: 2734  
Class: 8  
Packing Group: Packing Group II  
Hazard Label: Corrosive  
Hazard Label: Flammable liquid  
PIH: Not PIH

##### IATA

Proper Shipping Name: Polyamines, liquid, corrosive, flammable, n.o.s.  
IATA UN Number: 2734  
Hazard Class: 8

Section 15 - Regulatory Information

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EU ADDITIONAL CLASSIFICATION

Symbol of Danger: F-C

Indication of Danger: Highly Flammable. Corrosive.

R: 10-20/21/22-34

Risk Statements: Flammable. Harmful by inhalation, in contact with skin and if swallowed. Causes burns.

S: 16-26-36/37-45

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. Wear suitable protective clothing and gloves. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

US CLASSIFICATION AND LABEL TEXT

Indication of Danger: Flammable. Corrosive.

Risk Statements: Causes burns.

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. Take off immediately all contaminated clothing. Wear suitable protective clothing, gloves, and eye/face protection.

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: No

NDSL: Yes

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Section 16 - Other Information

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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.