

Material Safety Data Sheet

Version 3.1
Revision Date 01/11/2010
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1. PRODUCT AND COMPANY IDENTIFICATION

Product name : 2-Methylaziridine

Product Number : 294160
Brand : Aldrich

Company : Sigma-Aldrich
3050 Spruce Street
SAINT LOUIS MO 63103
USA

Telephone : +18003255832
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Emergency Phone # : (314) 776-6555

2. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms : Propyleneimine

Formula : C₃H₇N

CAS-No.	EC-No.	Index-No.	Concentration
Propyleneimine			
75-55-8	200-878-7	613-033-00-6	90 %
Sodium hydroxide			
1310-73-2	215-185-5	011-002-00-6	<= 10 %

3. HAZARDS IDENTIFICATION**Emergency Overview****OSHA Hazards**

Flammable liquid, Highly toxic by ingestion, Highly toxic by skin absorption, Carcinogen, Corrosive

Target Organs

Blood, Nerves., ears

HMIS Classification

Health hazard: 3
Chronic Health Hazard: *
Flammability: 3
Physical hazards: 1

NFPA Rating

Health hazard: 3
Fire: 3

Reactivity Hazard: 0

Potential Health Effects

Inhalation	Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract. May be fatal if inhaled.
Skin	Causes skin burns. May be fatal if absorbed through skin.
Eyes	Causes eye burns.
Ingestion	May be fatal if swallowed. Causes burns.

4. FIRST AID MEASURES

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

If inhaled

If breathed in, move person into fresh air. If not breathing give artificial respiration. Consult a physician.

In case of skin contact

Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

In case of eye contact

Continue rinsing eyes during transport to hospital. Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5. FIRE-FIGHTING MEASURES

Flammable properties

Flash point -10 °C (14 °F)

Ignition temperature no data available

Suitable extinguishing media

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.

Special protective equipment for fire-fighters

Wear self contained breathing apparatus for fire fighting if necessary.

Further information

Use water spray to cool unopened containers.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

Wear respiratory protection. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

Methods for cleaning up

Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

7. HANDLING AND STORAGE

Handling

Avoid inhalation of vapour or mist.

Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.

Storage

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Store in cool place.

Recommended storage temperature: 2 - 8 °C

Moisture sensitive.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Components with workplace control parameters**

Components	CAS-No.	Value	Control parameters	Update	Basis
Propyleneimine	75-55-8	TWA	0.2 ppm	2009-01-01	USA. ACGIH Threshold Limit Values (TLV)
Remarks	Upper Respiratory Tract irritation Kidney damage Confirmed animal carcinogen with unknown relevance to humans: The agent is carcinogenic in experimental animals at a relatively high dose, by route(s) of administration, at site(s), of histologic type(s), or by mechanism(s) that may not be relevant to worker exposure. Available epidemiologic studies do not confirm an increased risk of cancer in exposed humans. Available evidence does not suggest that the agent is likely to cause cancer in humans except under uncommon or unlikely routes or levels of exposure. Danger of cutaneous absorption				
		STEL	0.4 ppm	2009-01-01	USA. ACGIH Threshold Limit Values (TLV)
	Upper Respiratory Tract irritation Kidney damage Confirmed animal carcinogen with unknown relevance to humans: The agent is carcinogenic in experimental animals at a relatively high dose, by route(s) of administration, at site(s), of histologic type(s), or by mechanism(s) that may not be relevant to worker exposure. Available epidemiologic studies do not confirm an increased risk of cancer in exposed humans. Available evidence does not suggest that the agent is likely to cause cancer in humans except under uncommon or unlikely routes or levels of exposure. Danger of cutaneous absorption				
		TWA	2 ppm 5 mg/m3	1997-08-04	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
	Skin designation The value in mg/m3 is approximate.				
		TWA	2 ppm 5 mg/m3	1989-01-19	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
	Skin notation				
Sodium hydroxide	1310-73-2	CEIL	2 mg/m3	1994-09-01	USA. ACGIH Threshold Limit Values (TLV)

		C	2 mg/m3	1989-01-19	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
		TWA	2 mg/m3	1997-08-04	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
		C	2 mg/m3	2008-01-01	USA. ACGIH Threshold Limit Values (TLV)
Remarks	Eye, skin, & Upper Respiratory Tract irritation				

Personal protective equipment

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection

Handle with gloves.

Eye protection

Tightly fitting safety goggles. Faceshield (8-inch minimum).

Skin and body protection

Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Hygiene measures

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Form	liquid
Colour	colourless

Safety data

pH	no data available
Melting point	no data available
Boiling point	66 - 67 °C (151 - 153 °F) - lit.
Flash point	-10 °C (14 °F)
Ignition temperature	no data available
Lower explosion limit	no data available
Upper explosion limit	no data available
Density	0.808 g/mL at 25 °C (77 °F)
Water solubility	no data available

10. STABILITY AND REACTIVITY

Storage stability

Stable under recommended storage conditions.

Conditions to avoid

Heat, flames and sparks.

Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides, nitrogen oxides (NO_x), Sodium oxides

Hazardous reactions

Vapours may form explosive mixture with air.

Contains the following stabiliser(s):

Sodium hydroxide (<=10 %)

11. TOXICOLOGICAL INFORMATION**Acute toxicity**

LD50 Oral - rat - 19 mg/kg

LCLO Inhalation - rat - 4 h - 500 ppm

LCLO Inhalation - guinea pig - 1 h - 500 ppm

LD50 Dermal - guinea pig - 43 mg/kg

LD50 Intraperitoneal - mouse - 355 mg/kg

Irritation and corrosion

no data available

Sensitisation

no data available

Chronic exposure

IARC: 2B - Group 2B: Possibly carcinogenic to humans (Propyleneimine)

NTP: Reasonably anticipated to be a human carcinogen (Propyleneimine)

OSHA: Reasonably anticipated to be a human carcinogen

Signs and Symptoms of Exposure

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Potential Health Effects

Inhalation	Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract. May be fatal if inhaled.
Skin	Causes skin burns. May be fatal if absorbed through skin.
Eyes	Causes eye burns.
Ingestion	May be fatal if swallowed. Causes burns.
Target Organs	Blood, Nerves., ears,

Additional Information

RTECS: CM8050000

12. ECOLOGICAL INFORMATION**Elimination information (persistence and degradability)**

no data available

Ecotoxicity effects

no data available

Further information on ecology

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

13. DISPOSAL CONSIDERATIONS**Product**

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. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated packaging

Dispose of as unused product.

14. TRANSPORT INFORMATION**DOT (US)**

UN-Number: 1921 Class: 3 (6.1) Packing group: I
Proper shipping name: Propyleneimine, stabilized
Reportable Quantity (RQ): 1 lbs
Marine pollutant: No
Poison Inhalation Hazard: No

IMDG

UN-Number: 1921 Class: 3 (6.1) Packing group: I EMS-No: F-E, S-D
Proper shipping name: PROPYLENEIMINE, STABILIZED
Marine pollutant: No

IATA

UN-Number: 1921 Class: 3 (6.1) Packing group: I
Proper shipping name: Propyleneimine, stabilized

15. REGULATORY INFORMATION**OSHA Hazards**

Flammable liquid, Highly toxic by ingestion, Highly toxic by skin absorption, Carcinogen, Corrosive

DSL Status

This product contains the following components listed on the Canadian NDSL list. All other components are on the Canadian DSL list.

Propyleneimine

CAS-No.
75-55-8

SARA 302 Components

Propyleneimine

CAS-No.
75-55-8

Revision Date
2007-07-01

SARA 313 Components

Propyleneimine

CAS-No.
75-55-8

Revision Date
2007-07-01

SARA 311/312 Hazards

Fire Hazard, Acute Health Hazard, Chronic Health Hazard

Massachusetts Right To Know Components

Propyleneimine
Sodium hydroxide

CAS-No.
75-55-8
1310-73-2

Revision Date
2007-07-01
2007-03-01

Pennsylvania Right To Know Components

Propyleneimine
Sodium hydroxide

CAS-No.
75-55-8
1310-73-2

Revision Date
2007-07-01
2007-03-01

New Jersey Right To Know Components

Propyleneimine
Sodium hydroxide

CAS-No.
75-55-8
1310-73-2

Revision Date
2007-07-01
2007-03-01

California Prop. 65 Components

WARNING! This product contains a chemical known to the State of
California to cause cancer.
Propyleneimine

CAS-No.
75-55-8

Revision Date
2007-09-28

16. OTHER INFORMATION

Further information

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