SIGMA-ALDRICH

Material Safety Data Sheet

Version 3.1
Revision Date 01/11/2010
Print Date 07/19/2010

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
Fax : +18003255052
Emergency Phone # : (314) 776-6555

2. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms : Propyleneimine

Formula : C_3H_7N

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 lilkely 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 lilkely 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 (NOx), 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.

	CAS-No.
Propyleneimine	75-55-8

SARA 302 Components

	CAS-No.	Revision Date
Propyleneimine	75-55-8	2007-07-01

SARA 313 Components

	CAS-No.	Revision Date
Propyleneimine	75-55-8	2007-07-01

SARA 311/312 Hazards
Fire Hazard, Acute Health Hazard, Chronic Health Hazard

Massachusetts Right To Know Components

	CAS-No.	Revision Date
Propyleneimine	75-55-8	2007-07-01
Sodium hydroxide	1310-73-2	2007-03-01

Pennsylvania Right To Know Components

	CAS-No.	Revision Date
Propyleneimine	75-55-8	2007-07-01
Sodium hydroxide	1310-73-2	2007-03-01

New Jersey Right To Know Components

	CAS-No.	Revision Date
Propyleneimine	75-55-8	2007-07-01
Sodium hydroxide	1310-73-2	2007-03-01

California Prop. 65 Components

	CAS-No.	Revision Date
WARNING! This product contains a chemical known to the State of California to cause cancer. Propyleneimine	75-55-8	2007-09-28

16. OTHER INFORMATION

Further information

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 Co., 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.