SIGMA-ALDRICH

Material Safety Data Sheet

Version 3.0
Revision Date 08/20/2009
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1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Methylamine

Product Number : 295531
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 : Monomethylamine

Formula : CH_5N
Molecular Weight : 31.06 g/mol

CAS-No.	EC-No.	Index-No.	Concentration
mono-Methylamine			
74-89-5	200-820-0	612-001-01-6	-

3. HAZARDS IDENTIFICATION

Emergency Overview

OSHA Hazards
Flammable Gas, Compressed Gas, Toxic by inhalation., Toxic by ingestion, Corrosive

Other hazards which do not result in classification
Lachrymator.

HMIS Classification
Health Hazard: 3
Flammability: 4
Physical hazards: 3

NFPA Rating
Health Hazard: 3
Fire: 4
Reactivity Hazard: 0

Potential Health Effects

Inhalation Toxic if inhaled. Material is extremely destructive to the tissue of the mucous

	membranes and upper respiratory tract.
Skin	May be harmful if absorbed through skin. Causes skin burns.
Eyes	Causes eye burns.
Ingestion	Toxic 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. 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	< -30 °C (< -22 °F) - closed cup
Ignition temperature	430 °C (806 °F)

Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

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
Use personal protective equipment. 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.

Methods for cleaning up
Wipe up with absorbent material (e.g. cloth, fleece).

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. Use explosion-proof equipment.

Storage
Keep container tightly closed in a dry and well-ventilated place. Store in cool place.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value	Control parameters	Update	Basis
mono-Methylamine	74-89-5	TWA	5 ppm	2007-01-01	USA. ACGIH Threshold Limit Values (TLV)
Remarks	Eye, skin, & Upper Respiratory Tract irritation				
		STEL	15 ppm	2007-01-01	USA. ACGIH Threshold Limit Values (TLV)
	Eye, skin, & Upper Respiratory Tract irritation				
		TWA	10 ppm 12 mg/m3	1989-01-19	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
		TWA	10 ppm 12 mg/m3	1997-08-04	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
	The value in mg/m3 is approximate.				

Personal protective equipment

Respiratory protection
Respiratory protection is not required. Where protection is desired, use multi-purpose combination (US) or type AXBEK (EN 14387) respirator cartridges. 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
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Form	Compressed gas
Colour	colourless

Safety data

pH	14 at 100 g/l at 20 °C (68 °F)
Melting point	-93 °C (-135 °F) - lit.

Boiling point	-6.3 °C (20.7 °F) - lit.
Flash point	< -30 °C (< -22 °F) - closed cup
Ignition temperature	430 °C (806 °F)
Lower explosion limit	4.9 %(V)
Upper explosion limit	20.8 %(V)
Vapour pressure	1,861.0 hPa (1,395.9 mmHg) at 20 °C (68 °F)
Density	0.7 g/mL at 20 °C (68 °F)
Water solubility	no data available
Partition coefficient: n-octanol/water	log Pow: -0.713
Relative vapour density	1.07 - (Air = 1.0)

10. STABILITY AND REACTIVITY

Storage stability
Stable under recommended storage conditions.

Conditions to avoid
Heat, flames and sparks.

Materials to avoid
acids, Acid chlorides, Acid anhydrides, Oxidizing agents, Chloroformates, Phosphorus halides

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

11. TOXICOLOGICAL INFORMATION

Acute toxicity

LD50 Oral - rat - 100 mg/kg

LC50 Inhalation - mouse - 2 h - 2,400 mg/m3

Irritation and corrosion

Skin - rabbit - Severe skin irritation

Sensitisation

no data available

Chronic exposure

IARC:	No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
ACGIH:	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
NTP:	No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA:	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Potential Health Effects

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

Additional Information
RTECS: PF6300000

12. ECOLOGICAL INFORMATION

Elimination information (persistence and degradability)

no data available

Ecotoxicity effects

no data available

Further information on ecology

no data available

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: 1061 Class: 2.1
Proper shipping name: Methylamine, anhydrous
Marine pollutant: No
Poison Inhalation Hazard: No

IMDG
UN-Number: 1061 Class: 2.1 EMS-No: F-D, S-U
Proper shipping name: METHYLAMINE, ANHYDROUS
Marine pollutant: No

IATA
UN-Number: 1061 Class: 2.1
Proper shipping name: Methylamine, anhydrous
IATA Passenger: Not permitted for transport

15. REGULATORY INFORMATION

OSHA Hazards
Flammable Gas, Compressed Gas, Toxic by inhalation., Toxic by ingestion, Corrosive

DSL Status
All components of this product are on the Canadian DSL list.

SARA 302 Components
SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components
SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards
Fire Hazard, Sudden Release of Pressure Hazard, Acute Health Hazard

Massachusetts Right To Know Components

	CAS-No.	Revision Date
mono-Methylamine	74-89-5	2007-03-01

Pennsylvania Right To Know Components

	CAS-No.	Revision Date
mono-Methylamine	74-89-5	2007-03-01

New Jersey Right To Know Components

	CAS-No.	Revision Date
mono-Methylamine	74-89-5	2007-03-01

California Prop. 65 Components
This product does not contain any chemicals known to State of California to cause cancer, birth, or any other reproductive defects.

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.