

SIGMA-ALDRICH**SAFETY DATA SHEET**

according to Regulation (EC) No. 1907/2006

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GENERIC EU MSDS - NO COUNTRY SPECIFIC DATA - NO OEL DATA

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product name : Mechlorethamine hydrochloride

Product Number : 122564

Brand : Aldrich

Company : Sigma-Aldrich (Shanghai) Trading Co., Ltd
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2. HAZARDS IDENTIFICATION**Risk advice to man and the environment**

May cause cancer. May cause heritable genetic damage. Also very toxic if swallowed. Causes burns. May cause sensitization by inhalation and skin contact.

Other hazards which do not result in classification

Vesicant.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms : Nitrogen mustard
Bis(2-chloroethyl)methylamine
2-Chloro-N-(2-chloroethyl)-N-methylethanamine
Bis(2-Chloroethyl)methylamine
N-Methylbis(2-chloroethyl)aminehydrochloride

Formula : $C_5H_{11}Cl_2N \cdot HCl$

Molecular Weight : 192,51 g/mol

CAS-No.	EC-No.	Index-No.	Classification	Concentration
Chlormethine hydrochloride				
55-86-7	200-246-0	-	T+, R45 - R46 - R28 - R34 - R42/43	-

4. FIRST AID MEASURES**General advice**

Consult a physician. Show this safety data sheet to the doctor in attendance.

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

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**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.

6. ACCIDENTAL RELEASE MEASURES**Personal precautions**

Use personal protective equipment. Avoid dust formation. Avoid breathing dust. Ensure adequate ventilation. Evacuate personnel to safe areas.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Methods for cleaning up

Pick up and arrange disposal without creating dust. Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE**Handling**

Avoid exposure - obtain special instructions before use. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection.

Storage

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

hygroscopic

8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Personal protective equipment****Respiratory protection**

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N99 (US) or type P2 (EN 143) 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

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it. Handle with gloves.

Eye protection

Safety glasses

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 solid

Safety data

pH no data available

Melting point 108 - 111 °C

Boiling point no data available

Flash point no data available

Ignition temperature no data available

Lower explosion limit no data available

Upper explosion limit no data available

Water solubility no data available

10. STABILITY AND REACTIVITY**Storage stability**

Stable under recommended storage conditions.

Conditions to avoid

Avoid moisture.

Materials to avoid

Strong oxidizing agents

Hazardous decomposition products

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

11. TOXICOLOGICAL INFORMATION**Acute toxicity**

LD50 Oral - rat - 10 mg/kg

Irritation and corrosion

no data available

Sensitisation

no data available

Chronic exposure

This product is or contains a component that has been reported to be probably carcinogenic based on its IARC, OSHA, ACGIH, NTP, or EPA classification.

IARC: Group 2A - Probably carcinogenic to humans (Chlormethine hydrochloride)

May alter genetic material.

Laboratory experiments have shown teratogenic effects.

Signs and Symptoms of Exposure

Cough, Shortness of breath, Headache, Nausea, Vomiting

Potential Health Effects

Inhalation	May be harmful 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	May be fatal if swallowed. Causes burns.
Target Organs	Bone marrow, Immune system., Blood, Central nervous system, ears, Reproductive system.,

Additional Information

RTECS: IA2100000

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

Observe all federal, state, and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated packaging

Dispose of as unused product.

14. TRANSPORT INFORMATION

ADR/RID

UN-Number: 2811 Class: 6.1 Packing group: II
Proper shipping name: TOXIC SOLID, ORGANIC, N.O.S. (Chlormethine hydrochloride)

IMDG

UN-Number: 2811 Class: 6.1 Packing group: II EMS-No: F-A, S-A
Proper shipping name: TOXIC SOLID, ORGANIC, N.O.S. (Chlormethine hydrochloride)
Marine pollutant: No

IATA

UN-Number: 2811 Class: 6.1 Packing group: II
Proper shipping name: Toxic solid, organic n.o.s. (Chlormethine hydrochloride)

15. REGULATORY INFORMATION

Labelling according to EC Directives

Hazard symbols

T+	Very toxic
R-phrases(s)	
R45	May cause cancer.
R46	May cause heritable genetic damage.
R28	Also very toxic if swallowed.
R34	Causes burns.
R42/43	May cause sensitization by inhalation and skin contact.
S-phrases(s)	
S53	Avoid exposure - obtain special instructions before use.
S45	In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
S36/37/39	Wear suitable protective clothing, gloves and eye/face protection.
Restricted to professional users.	

16. OTHER INFORMATION

Further information

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