



MATERIAL SAFETY DATA SHEET

2-DIMETHYLAMINOETHYL CHLORIDE HYDROCHLORIDE

SECTION 1- CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MSDS Name:

2-Dimethylaminoethyl Chloride Hydrochloride, 99%

Catalog Numbers:

AC115820000, AC115820050, AC115821000, AC115825000

Synonyms:

2-Chloro-N,N-Dimethylethylamine Hydrochloride; Bis(Methyl)-2-Chloroethylamine Hydrochloride.

Company Information:

LEONID CHEMICALS

62/A-2 1st Stage, Yeshwanthpur Industrial Suburb

Ashokpuram School Road

Bangalore-560 022, Karnataka, INDIA

Ph: +91-80-2337 8354, Fax: +91-80-2357 4827

SECTION 2- COMPOSITION, INFORMATION ON INGREDIENTS

CAS #	:	4584-46-7
Chemical Name	:	2-Dimethylaminoethyl Chloride Hydrochloride
%	:	99 %
EINECS#	:	224-970-1
Hazard Symbols	:	Un Listed
Risk Phrases	:	Un Listed

SECTION 3- HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Appearance: off-white crystalline powder.

Warning! Harmful if swallowed or absorbed through the skin. May cause eye and skin irritation. May cause respiratory and digestive tract irritation. Hygroscopic (absorbs moisture from the air).

Target Organs:

None known

Potential Health Effects

Eye:

May cause eye irritation.

Skin:

May cause skin irritation. Harmful if absorbed through the skin. Prolonged and/or repeated contact may cause irritation and/or dermatitis.

Ingestion:

Harmful if swallowed. May cause gastrointestinal irritation with nausea, vomiting and

diarrhea.

Inhalation:

May cause respiratory tract irritation.

Chronic:

Prolonged or repeated skin contact may cause dermatitis.

SECTION 4- FIRST AID MEASURES

Eyes:

Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.

Skin:

Get medical aid. Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse.

Ingestion:

Never give anything by mouth to an unconscious person. Get medical aid. Do NOT induce vomiting. If conscious and alert, rinse mouth and drink 2-4 cupfuls of milk or water.

Inhalation:

Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

Notes to Physician:

Treat symptomatically and supportively.

SECTION 5- FIRE FIGHTING MEASURES

General Information:

As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Vapors may be heavier than air. They can spread along the ground and collect in low or confined areas.

Extinguishing Media:

Use agent most appropriate to extinguish fire. Do NOT get water inside containers. Use water spray, dry chemical, carbon dioxide, or appropriate foam

Flash Point:

Not available

Autoignition Temperature:

220 deg C (428.00 deg F)

Explosion Limits, Lower:

Not available.

Upper:

Not available.

NFPA Rating:

(estimated) Health: 2; Flammability: 1; Instability: 0

SECTION 6- ACCIDENTAL RELEASE MEASURES

General Information:

Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks:

Clean up spills immediately, observing precautions in the Protective Equipment section.

Sweep up, then place into a suitable container for disposal. Avoid generating dusty conditions. Provide ventilation. Do not get water inside containers

SECTION 7 - HANDLING and STORAGE

Handling:

Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Avoid ingestion and inhalation. Do not allow contact with water. Keep from contact with moist air and steam.

Storage:

Keep container closed when not in use. Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances. Store protected from moisture.

SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION

Engineering Controls:

Use adequate ventilation to keep airborne concentrations low.

Exposure Limits :

Chemical Name	:	2-Dimethylaminoethyl Chloride Hydrochloride
ACGIH	:	none listed
NIOSH	:	none listed
OSHA - Final PELs	:	none listed

OSHA Vacated PELs:

2-Dimethylaminoethyl Chloride Hydrochloride: No OSHA Vacated PELs are listed for this chemical.

Personal Protective Equipment

Eyes:

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard En166.

Skin:

Wear appropriate protective gloves to prevent skin exposure.

Clothing:

Wear appropriate protective clothing to prevent skin exposure.

Respirators:

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Physical State	:	Crystalline powder
Appearance	:	off-white
Odor	:	None reported.
pH	:	Not available.
Vapor Pressure	:	Not available.
Vapor Density	:	5.0

Evaporation Rate	:	Not available.
Viscosity	:	Not available.
Boiling Point	:	Not available.
Freezing/Melting Point	:	205.00 - 208.00 deg C
Decomposition Temperature	:	Not available.
Solubility	:	2000 g/l (20 c)
Specific Gravity/Density	:	Not available.
Molecular Formula	:	C4H10ClN.HCl
Molecular Weight	:	144.05

SECTION 10 - STABILITY AND REACTIVITY

Chemical Stability:

Stable under normal temperatures and pressures.

Conditions to Avoid:

Incompatible materials, dust generation, moisture, excess heat, strong oxidants.

Incompatibilities with Other Materials:

Oxidizing agents.

Hazardous Decomposition Products:

Hydrogen chloride, nitrogen oxides, carbon monoxide, irritating and toxic fumes and gases, carbon dioxide, nitrogen.

Polymerization:

Has not been reported.

SECTION 11 - TOXICOLOGICAL INFORMATION

RTECS#:

CAS# 4584-46-7: Kq9020000

LD50/LC50:

CAS# 4584-46-7:

Draize test, rabbit, eye: 100 mg/24H Moderate;

Draize test, rabbit, skin: 500 mg/24H Moderate;

Oral, rat: LD50 = 238 mg/kg;

Skin, rabbit: LD50 = 290 mg/kg;<BR.

Carcinogenicity:

CAS# 4584-46-7: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

Epidemiology : No information available.

Teratogenicity : No information available

Reproductive Effects: No information available

Mutagenicity : No information available

Neurotoxicity : No information available

Other Studies:

Un Listed

SECTION 12 - ECOLOGICAL INFORMATION

No information available.

SECTION 13 - DISPOSAL CONSIDERATIONS

Chemical waste generators must determine whether a discarded chemical is classified as

a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification

-
RCRAP-Series : None listed.
RCRAU-Series : None listed.

SECTION 14 - TRANSPORT INFORMATION

US DOT

Shipping Name : TOXIC SOLIDS, ORGANIC, N.O.S.
Hazard Class : 6.1
UN Number : Un2811
Packing Group : I

Canada TDG

Shipping Name : No information available.
Hazard Class :
UN Number :
Packing Group :

SECTION 15 - REGULATORY INFORMATION

US FEDERAL

TSCA

CAS# 4584-46-7 is listed on the TSCA inventory.

Health & Safety Reporting List

None of the chemicals are on the Health & Safety Reporting List.

Chemical Test Rules

None of the chemicals in this product are under a Chemical Test Rule.

Section 12b

None of the chemicals are listed under TSCA Section 12b.

TSCA Significant New Use Rule

None of the chemicals in this material have a SNUR under TSCA

CERCLA Hazardous Substances and corresponding Rqs

None of the chemicals in this material have an RQ.

SARA Section 302 Extremely Hazardous Substances

None of the chemicals in this product have a TPQ.

Section 313:

No chemicals are reportable under Section 313.

Clean Air Act:

This material does not contain any hazardous air pollutants.

This material does not contain any Class 1 Ozone depletors.

This material does not contain any Class 2 Ozone depletors.

Clean Water Act:

None of the chemicals in this product are listed as Hazardous Substances under the CWA.

None of the chemicals in this product are listed as Priority Pollutants under the CWA.

None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

OSHA:

None of the chemicals in this product are considered highly hazardous by OSHA.

STATE:

CAS# 4584-46-7 is not present on state lists from CA, PA, MN, MA, FL, or NJ.

California Prop 65

California No Significant Risk Level: None of the chemicals in this product are listed.

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols:

XN

Risk Phrases:

R 21/22 Harmful in contact with skin and if swallowed.

Safety Phrases:

S 24/25 Avoid contact with skin and eyes.

S 37 Wear suitable gloves.

S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

S 28A After contact with skin, wash immediately with plenty of water.

WGK (Water Danger/Protection)

CAS# 4584-46-7: No information available.

Canada - DSL/NDSL:

CAS# 4584-46-7 is listed on Canada's DSL List.

Canada WHMIS:

WHMIS: Not available.

Canadian Ingredient Disclosure List:

Un Listed

SECTION 16 - ADDITIONAL INFORMATION

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Fisher be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Fisher has been advised of the possibility of such damages.