



## MATERIAL SAFETY DATA SHEET

N-(2-CHLOROETHYL)-MORPHOLINE

### SECTION 1- CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MSDS Name:  
N-(2-CHLOROETHYL)-MORPHOLINE

Catalog Numbers: 10920-0000, 10920-0050, 10920-1000, 10920-5000

Synonyms:  
Un Listed

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 #	:	3647-69-6
Chemical Name	:	N-(2-CHLOROETHYL)-MORPHOLINE
%	:	99 %
EINECS#	:	222-881-2
Hazard Symbols	:	None Listed.
Risk Phrases	:	None Listed.

### SECTION 3- HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW  
None Listed.

#### Potential Health Effects

The toxicological properties of this material have not been investigated. Use appropriate procedures to prevent opportunities for direct contact with the skin or eyes and to prevent inhalation.

### SECTION 4- FIRST AID MEASURES

#### Eyes:

Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids.

#### Skin:

Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.

#### Ingestion:

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.

Notes to Physician:

Un Listed

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## SECTION 5- FIRE FIGHTING MEASURES

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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.

Extinguishing Media:

In case of fire, use water, dry chemical, chemical foam, or alcohol-resistant foam.

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## SECTION 6- ACCIDENTAL RELEASE MEASURES

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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.

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## SECTION 7 - HANDLING and STORAGE

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Handling:

Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Avoid contact with eyes, skin, and clothing. Avoid ingestion and inhalation.

Storage:

Store in a cool, dry place. Keep container closed when not in use.

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## SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION

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Engineering Controls:

Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits. Use process enclosure, local exhaust ventilation, or other engineering controls to control airborne levels.

Personal Protective Equipment

Eyes:

Wear safety glasses and chemical goggles if splashing is possible.

Skin:

Wear appropriate protective gloves and clothing to prevent skin exposure.

Clothing:

Wear appropriate protective clothing to minimize contact with skin.

Respirators:

Wear a NIOSH/MSHA or European Standard EN 149 approved full-facepiece airline respirator in the positive pressure mode with emergency escape provisions.

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## SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

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Physical State	:	Crystalline powder
Color	:	white to beige
Odor	:	Not available.
pH	:	Not available.
Vapor Pressure	:	Not available.
Viscosity	:	Not available.
Boiling Point	:	Not available.
Freezing/Melting Point	:	182.00 - 185.00 deg C
Autoignition Temperature	:	Not available.
Flash Point	:	Not available.
Explosion Limits, lower	:	Not available.
Explosion Limits, upper	:	Not available.
Decomposition Temperature	:	Un Listed
Solubility in water	:	Un Listed
Specific Gravity/Density	:	Un Listed
Molecular Formula	:	C6H12ClNO.HCl
Molecular Weight	:	186.08

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## SECTION 10 - STABILITY AND REACTIVITY

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### Chemical Stability:

Stable under normal temperatures and pressures.

### Conditions to Avoid:

Incompatible materials.

### Incompatibilities with Other Materials:

Strong 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.

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## SECTION 11 - TOXICOLOGICAL INFORMATION

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### RTECS#:

CAS# 3647-69-6: Qe0260000

### LD50/LC50:

Not available.

### Carcinogenicity:

N-(2-CHLOROETHYL)-MORPHOLINE HYDROCHLORIDE, 99% -

Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.

See actual entry in RTECS for complete information.

### Other:

Un Listed

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## SECTION 12 - ECOLOGICAL INFORMATION

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Un Listed

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SECTION 13 - DISPOSAL CONSIDERATIONS  
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Dispose of in a manner consistent with federal, state, and local regulations.  
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SECTION 14 - TRANSPORT INFORMATION  
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IATA

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

IMO

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

ID/ADR

Shipping Name : No information available.  
Hazard Class :  
UN Number :  
Packing Group :  
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SECTION 15 - REGULATORY INFORMATION  
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European/International Regulations  
European Labeling in Accordance with EC Directives

Hazard Symbols:  
Not available.

Risk Phrases:  
Not available.

Safety Phrases:  
S 24/25 Avoid contact with skin and eyes.

WGK (Water Danger/Protection)  
CAS# 3647-69-6: No information available.

United Kingdom Occupational Exposure Limits

United Kingdom Maximum Exposure Limits

Canada  
CAS# 3647-69-6 is listed on Canada's NDSL List.  
CAS# 3647-69-6 is not listed on Canada's Ingredient Disclosure List.

Exposure Limits  
Un Listed

US FEDERAL  
TSCA  
CAS# 3647-69-6 is listed on the TSCA inventory.

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SECTION 16 - ADDITIONAL INFORMATION

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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 way shall the company 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 the company has been advised of the possibility of such damages.

