



MATERIAL SAFETY DATA SHEET

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SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MSDS Name: L-(+)-PROLINOL

Catalog Numbers:

41832-0000, 41832-0010, 41832-0050

Synonyms:

(S)-(+)-2-Hydroxymethylpyrrolidine; (S)-(+)-2-Pyrrolidinemethanol, 95%

Company Identification (Europe):

LEONID CHEMICALS
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SECTION 2 - COMPOSITION, INFORMATION ON INGREDIENTS

CAS # : 23356-96-9
Chemical Name : L-(+)-PROLINOL
% : 95%
EINECS# : 245-605-2
Hazard Symbols : XI
Risk Phrases : 36/37/38

SECTION 3 - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Irritating to eyes, respiratory system and skin. Hygroscopic (absorbs moisture from the air). Air sensitive.

Potential Health Effects

Eye:

Causes eye irritation.

Skin:

Causes skin irritation. May be harmful if absorbed through the skin.

Ingestion:

May cause irritation of the digestive tract. May be harmful if swallowed.

Inhalation:

Causes respiratory tract irritation. May be harmful if inhaled.



Chronic:
Not available.

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.

Ingestion:

Get medical aid. Wash mouth out with 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. Will burn if involved in a fire. Combustible liquid.

Extinguishing Media:

Use water spray, dry chemical, carbon dioxide, or chemical foam.

**** SECTION 6 - ACCIDENTAL RELEASE MEASURES ****

General Information:

Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks:

Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container.

SECTION 7 - HANDLING AND STORAGE

Handling:

Avoid breathing dust, vapor, mist, or gas. Avoid contact with skin and eyes. Use and store under nitrogen.

Storage:

Keep away from sources of ignition. Store in a cool, dry place. Store in a tightly closed container. Keep refrigerated. (Store below 4°C/39°F.)

SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION

Engineering Controls:

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

Personal Protective Equipment**Eyes:**

Wear chemical goggles.

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. Always use a NIOSH or European Standard EN 149 approved respirator when necessary.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Physical State	: Viscous liquid
Color	: clear colorless to faint yellow
Odor	: Not available.
PH	: Not available.
Vapor Pressure	: Not available.
Viscosity	: Not available.
Boiling Point	: Not available.
Freezing/Melting Point	: 74-76 deg C @ 2 mmHg
Autoignition Temperature	: Not available.
Flash Point	: 86 deg C (186.80 deg F)
Explosion Limits, lower	: Not available.
Explosion Limits, upper	: Not available.
Decomposition Temperature	NA
Solubility in water	NA
Specific Gravity/Density	:1.0360g/cm ³
Molecular Formula	C ₅ H ₁₁ NO
Molecular Weight	101.15

SECTION 10 - STABILITY AND REACTIVITY

Chemical Stability:

Stable under normal temperatures and pressures.

Conditions to Avoid:

Incompatible materials, exposure to air, exposure to moist air or water.

Incompatibilities with Other Materials:

Strong oxidizing agents, acid chlorides, acid anhydrides.

Hazardous Decomposition Products:

Nitrogen oxides, carbon monoxide, carbon dioxide.

Hazardous Polymerization:

Has not been reported

SECTION 11 - TOXICOLOGICAL INFORMATION

RTECS#:

CAS# 23356-96-9 unlisted.

LD50/LC50:

Not available.

Carcinogenicity:

L-(+)-PROLINOL -

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

See actual entry in RTECS for complete information.

SECTION 12 - ECOLOGICAL INFORMATION

NA

SECTION 13 - DISPOSAL CONSIDERATIONS

Dispose of in a manner consistent with federal, state, and local regulations.

SECTION 14 - TRANSPORT INFORMATION

IATA

No information available.

IMO

No information available.

RID/ADR

No information available.

SECTION 15 - REGULATORY INFORMATION

European/International Regulations**European Labeling in Accordance with EC Directives**

Hazard Symbols: Xi

Risk Phrases:

R 36/37/38 Irritating to eyes, respiratory system and skin.

Safety Phrases:

S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S 37/39 Wear suitable gloves and eye/face protection.

WGK (Water Danger/Protection)

CAS# 23356-96-9: 1

United Kingdom Occupational Exposure Limits**United Kingdom Maximum Exposure Limits****Canada**

None of the chemicals in this product are listed on the DSL/NDSL list.

CAS# 23356-96-9 is not listed on Canada's Ingredient Disclosure List.

Exposure Limits**US FEDERAL****TSCA**

CAS# 23356-96-9 is not listed on the TSCA inventory.

It is for research and development use only.

SECTION 16 - ADDITIONAL INFORMATION

MSDS Creation Date: 7/16/1996 Revision #1 Date: 5/23/2000

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.


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