



MATERIAL SAFETY DATA SHEET

CONTACT : **LEONID CHEMICALS**
Leonid Chemicals Pvt Ltd
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 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MSDS Name: (S)-(-)-2-Pyrrolidone-5-carboxylic acid, 98%

Catalog Numbers:

13212-0000, 13212-1000

Synonyms:

L-Pyroglutamic acid

Company Identification:

LEONID CHEMICALS
62/A-2 2nd Stage, Industrial Suburb
Yeshwanthpur, Bangalore -22, INDIA
Ph- +91-80-23378354

SECTION 2 - COMPOSITION, INFORMATION ON INGREDIENTS

CAS #	: 98-79-3
Chemical Name	: (S)-(-)-2-Pyrrolidone-5-carboxylic acid
%	: 98%
EINECS#	: 202-700-3
Hazard Symbols	: XI
Risk Phrases	: 36/37

SECTION 3 - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Irritating to eyes and respiratory system.

Potential Health Effects

Eye:

Causes eye irritation.

Skin:

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

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.

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:

Sweep up, then place into a suitable container for disposal. Avoid generating dusty conditions.

SECTION 7 - HANDLING AND STORAGE

Handling:

Avoid breathing dust, vapor, mist, or gas. Avoid contact with skin and eyes.

Storage:

Store in a cool, dry place. Store in a tightly closed container.

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 and clothing to prevent skin exposure.

Clothing:

Wear appropriate protective clothing to prevent skin exposure.

Respirators:

Follow the OSHA respirator regulations found in 29 FR 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	: Crystalline powder
Color	: white to off-white
Odor	: Not available.
PH	: 1.7 (5% aq.sol.)
Vapor Pressure	: Not available.
Viscosity	: Not available.
Boiling Point	: Not available.
Freezing/Melting Point	: 152 - 162 deg C
Autoignition Temperature	: Not available.
Flash Point	: Not available.
Explosion Limits, lower	: Not available.
Explosion Limits, upper	: Not available.
Decomposition Temperature	NA
Solubility in water	: 10-15% (20° C)
Specific Gravity/Density	NA
Molecular Formula	C5H7NO3
Molecular Weight	129.12

SECTION 10 - STABILITY AND REACTIVITY

Chemical Stability:

Stable under normal temperatures and pressures.

Conditions to Avoid:

Incompatible materials.

Incompatibilities with Other Materials:

Strong oxidizing agents, acids, acid chlorides, aluminum, carbon dioxide, iron, acid anhydrides.

Hazardous Decomposition Products:

Nitrogen oxides, carbon monoxide, carbon dioxide.

Hazardous Polymerization:

Has not been reported.

SECTION 11 - TOXICOLOGICAL INFORMATION

RTECS#:

CAS# 98-79-3: TW3710000

LD50/LC50:

CAS# 98-79-3: Oral, rat: LD50 = >1 gm/kg.
oral, rat: LD50 > 2000 mg/kg (supplier)

Carcinogenicity:

(S)-(-)-2-Pyrrolidone-5-carboxylic acid -
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

Shipping Name: Not regulated.

Hazard Class:NA

UN Number:NA

Packing Group:NA

IMO

Shipping Name: Not regulated.
Hazard Class:NA
UN Number:NA
Packing Group:NA

RID/ADR

Shipping Name: Not regulated.
Hazard Class:NA
UN Number:NA
Packing group:NA

SECTION 15 - REGULATORY INFORMATION

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: Xi

Risk Phrases:

R 36/37 Irritating to eyes and respiratory system.

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# 98-79-3: 0

United Kingdom Occupational Exposure Limits

United Kingdom Maximum Exposure Limits

Canada

CAS# 98-79-3 is listed on Canada's DSL List.

CAS# 98-79-3 is not listed on Canada's Ingredient Disclosure List.

Exposure Limits

US FEDERAL

TSCA

CAS# 98-79-3 is listed on the TSCA inventory.

SECTION 16 - ADDITIONAL INFORMATION

MSDS Creation Date: 1/28/2000 Revision #1 Date: 2/13/2004

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