SECTION-1: Identification of the substance / mixture and the company / undertaking

Catalogue Number	CS-EC-00096
Product Name	DL-Lactonitrile
CAS No.	78-97-7
Category	Building Blocks
Synonyms	2-Hydroxypropionitrile; Acetaldehyde cyanohydrin
Brand	Clearsynth Labs Ltd.
Identified uses	Laboratory Chemicals
Uses advised against	Not available
Company	Clearsynth Labs Ltd. Mumbai, India
Emergency Phone #	+91-22-245045900
REACH No.	Not available

SECTION 2: Hazards identification

Disclaimer: This is sample MSDS. Please email **sales@clearsynth.com** for more details.

2.1 Classification of the substance or mixture-Regulation (EC) No 1272/2008:

Acute toxicity (Category 4)

2.2 Label Elements

Signal Word: Warning



Hazard Statement(s)

Code	Statement
H300	Not available
H301	Not available
H310	Not available
H330	Not available

H332	Harmful if inhaled.
H400	Not available
H412	Not available
H331	Not available
H227	Not available
H370	Not available
H373	Not available

Precautionary Statement(s)

Code	Statement
P260	Not available
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P262	Not available
P264	Wash hands thoroughly after handling.
P270	Not available
P271	Use only outdoors or in a well-ventilated area.
P273	Not available
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P284	Not available
P301+P316	Not available
P302+P352	IF ON SKIN: Wash with plenty of water and soap.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P316	Not available
P317	Not available
P320	Not available
P321	Specific treatment (see … on this label).
P330	Not available
P361+P364	Not available
P391	Not available
P403+P233	Store in a well-ventilated place. Keep container tightly closed.

P405	Store locked up.
P501	Dispose of contents/container in accordance with local/regional/national/international regulatio
P210	Not available
P308+P316	Not available
P319	Get medical help if you feel unwell.
P370+P378	Not available
P403	Not available

SECTION 3: Composition / information on ingredients

3.1 Substance

Component : DL-Lactonitrile
CAS Number : 78-97-7
Molecular Formula : C3H5NO
Molecular Weight : 71.08
Parent Chemical : Not available
Synonyms : 2-Hydroxypropionitrile; Acetaldehyde cyanohydrin
Concentration : Not available

SECTION 4: First aid measures

SECTION 4: First-aid measures

4.1 Description of first aid measures
General advice: Remove contaminated clothing and shoes. Seek medical attention if symptoms occur or persist.
Inhalation: Move person to fresh air. Keep at rest. If breathing is difficult, seek medical attention.
Skin contact: Wash with plenty of soap and water. Get medical attention if irritation develops.
Eye contact: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. Seek medical attention.
Ingestion: Rinse mouth. Do NOT induce vomiting unless directed by medical personnel. Seek medical attention.

4.2 Most important symptoms and effects, both acute and delayed
Not available.

4.3 Indication of any immediate medical attention and special treatment needed
Treat symptomatically. Not available.

SECTION 5: Firefighting measures

SECTION 5: Fire-fighting measures

5.1 Extinguishing media
Suitable extinguishing media: Use extinguishing measures appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media: Not available.

5.2 Special hazards arising from the substance or mixture
Hazardous combustion products: Not available.
Specific hazards: Not available.

5.3 Advice for firefighters
Protective equipment: Wear self-contained breathing apparatus (SCBA) and full protective gear.
Firefighting instructions: Cool containers with water spray if exposed to fire. Prevent fire-fighting water from entering drains or waterways.

SECTION 6: Accidental release measures

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Avoid breathing vapors/mist. Avoid contact with skin and eyes. Ensure adequate ventilation. Wear appropriate personal protective equipment.

6.2 Environmental precautions
Avoid release to the environment. Prevent entry into drains, sewers, and waterways.

6.3 Methods and material for containment and cleaning up
Contain spill. Absorb with inert material. Collect into suitable, labeled containers for disposal. Clean contaminated area.

6.4 Reference to other sections
See Section 8 for personal protective equipment and Section 13 for disposal considerations.

SECTION-7: Handling and storage

SECTION 7: Handling and storage

7.1 Precautions for safe handling
Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes, and clothing. Avoid breathing vapors/mist. Use only with adequate ventilation.

7.2 Conditions for safe storage, including any incompatibilities
Store in a cool, dry, well-ventilated place. Keep container tightly closed. Protect from moisture and heat.
Incompatibilities: Not available.

7.3 Specific end use(s)
Building block / laboratory chemical. Not available.

SECTION 8: Exposure controls / personal protection

SECTION 8: Exposure controls/personal protection

8.1 Control parameters
Occupational exposure limits: Not available.
Biological limit values: Not available.

8.2 Exposure controls

Engineering controls: Provide adequate ventilation. Use local exhaust where appropriate.
Personal protective equipment (PPE):
- Eye/face protection: Safety glasses with side shields or chemical splash goggles.
- Skin protection: Protective gloves. Protective clothing as appropriate.
- Respiratory protection: If ventilation is inadequate, use appropriate respiratory protection.
- Hygiene measures: Wash hands after handling. Remove contaminated clothing and wash before reuse.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Test	Result
Appearance	No data available
IR spectrum	No data available
pH	No data available
Solubility	No data available

Property	Value
a) Physical State	No data available
b) Color	No data available
c) Odor	No data available
d) pH	No data available
e) Vapour Pressure	No data available
f) Viscosity	No data available
g) Initial Boiling Point and boiling range	No data available
h) Melting Point / Freezing Point	No data available
i) Auto Ignition Temperature	No data available
j) Flash Point	No data available
k) Explosion Limit, Lower	No data available
l) Explosion Limit, Upper	No data available
m) Decomposition Temperature	No data available
n) Loss on Drying	No data available
o) Relative Density	No data available

Property	Value
p) Solubility (in DMSO)	No data available
q) Oxidizing Properties	No data available

SECTION 10: Stability and reactivity

SECTION 10: Stability and reactivity

10.1 Reactivity
Not available.

10.2 Chemical stability
Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions
Not available.

10.4 Conditions to avoid
Heat, ignition sources, and other conditions leading to decomposition. Not available.

10.5 Incompatible materials
Not available.

10.6 Hazardous decomposition products
Not available.

SECTION 11: Toxicological information

11.1 Information on toxicological effects
- Acute toxicity: ... Extremely toxic cmpd by oral administration and skin or eye contact. Acute oral LD50 (species not mentioned) was 21 mg/kg with deaths occurring ... 10 mg/kg. ... 0.05 ml of undiluted cmpd applied to eye was fatal to all animals within ... 5 min. LD50 by skin application was less than 1 ml/kg with all deaths occurring within 1 hr.
LD50 Rat oral 21 mg/kg
- Skin corrosion/irritation: No data available.
- Serious eye damage/eye irritation: No data available.
- Respiratory or skin sensitization: No data available.
- Germ cell mutagenicity: No data available.
- Carcinogenicity: Inadequate information to assess carcinogenic potential
- Reproductive toxicity: No data available.
- STOT-single exposure: No data available.
- STOT-repeated exposure: No data available.
- Aspiration hazard: No data available.

Likely routes of exposure
- ... CONSIDERED TO BE EXTREMELY TOXIC BY /INGESTION/ SKIN ABSORPTION, & EYE CONTACT.

Symptoms related to the physical, chemical and toxicological characteristics
- It is unknown whether or not lactonitrile produces its /toxic/ effects by virtue of hydrolysis to give cyanide ion or whether it acts as molecule.

SECTION 12: Ecological information

SECTION 12: Ecological information

12.1 Toxicity
Not available.

12.2 Persistence and degradability
Not available.

12.3 Bioaccumulative potential
Not available.

12.4 Mobility in soil
Not available.

12.5 Results of PBT and vPvB assessment
Not available.

12.6 Endocrine disrupting properties
Not available.

12.7 Other adverse effects
Not available.

SECTION 13: Disposal considerations

SECTION 13: Disposal considerations

13.1 Waste treatment methods
Dispose of contents/container in accordance with local/regional/national/international regulations. Do not discharge to drains.
Contaminated packaging: Dispose of as unused product in accordance with applicable regulations.
Waste codes: Not available.

SECTION 14: Transport information

SECTION 14: Transport information

14.1 UN number
Not available.

14.2 UN proper shipping name
Not available.

14.3 Transport hazard class(es)
Not available.

14.4 Packing group
Not available.

14.5 Environmental hazards
Not available.

14.6 Special precautions for user
Not available.

14.7 Maritime transport in bulk according to IMO instruments
Not available.

SECTION 15: Regulatory information

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
Not available.

15.2 Chemical safety assessment
Not available.

SECTION 16: Other information

SECTION 16: Other information

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Synonyms: 2-Hydroxypropionitrile; Acetaldehyde cyanohydrin
Supplier: Clearsynth Labs Ltd., Mumbai, India
Emergency phone: +91-22-245045900

Revision date: Not available
Disclaimer: The information provided is believed to be accurate based on available data; however, no warranty is expressed or implied. Users must determine suitability for their particular purpose and comply with all applicable regulations.

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