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## 1. Identification of the substance/mixture and of the company/undertaking

### 1.1. Product identifier

Trade name : 1,10 PHENANTHROLINE MONOHYDRATE AR/ACS  
Product code : 05160  
Identification of the product : 1,10-PHENANTHROLINEAR 99.5%  
CAS No :5144-89-8

### 1.2. Relevant identified uses of the substance or mixture and uses advised against

Use : Industrial. For professional use only.

### 1.3. Details of the supplier of the safety data sheet

Company identification : LOBA CHEMIE PVT.LTD.  
107 Wode House Road, Jehangir Villa, Colaba  
400005 Mumbai INDIA  
Contact: +91 22 6663 6663 / Fax +91 22 6663 6699 / info@lobachemie.com  
Safety Officer: + 91 98213 31336 / + 91 98214 86040 / safety@lobachemie.com

### 1.4. Emergency telephone number

Phone nr : + 91 22 6663 6663 (9:00am - 6:00 pm) [ Office hours ]

## 2. Hazards identification -DSD

### 2.1. Classification of the substance or mixture

#### Classification EC 67/548 or EC 1999/45

Classification : T; R25  
N; R50-53

#### Hazard Class and Category Code(s), Regulation (EC) No 1272/2008 (CLP)


Health hazards : Acute toxicity, Oral - Category 3 - Danger (CLP : Acute Tox. 3) H301  
Environmental hazards : Hazardous to the aquatic environment - Acute hazard - Category 1 - Warning (CLP : Aquatic Acute 1) H400  
Hazardous to the aquatic environment - Chronic hazard - Category 1 - Warning (CLP : Aquatic Chronic 1) H410

### 2.2. Label elements

#### Labelling EC 67/548 or EC 1999/45

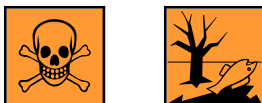
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**2. Hazards identification -DSD (continued)**

Symbol(s)



Symbol(s)

: T : Toxic  
N : Dangerous for the environment

R Phrase(s)

: R25 : Toxic if swallowed.  
R50/53 : Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

S Phrase(s)

: S45 : In case of accident or if you feel unwell, seek medical advice immediately (show the label when possible).  
S60 : This material and its container must be disposed of as hazardous waste.  
S61 : Avoid release to the environment. Refer to special instructions/Safety data sheets.

**Labelling Regulation EC 1272/2008 (CLP)**

Hazard pictograms



Signal words

: Danger

Hazard statements

: H301 : Toxic if swallowed.  
H410 : Very toxic to aquatic life with long lasting effects.

Precautionary statements

• Prevention

: P273: Avoid release to the environment.  
P264: Wash thoroughly after handling.  
P270: Do not eat, drink or smoke when using this product.

• Response

: P301+P310: IF SWALLOWED : Immediately call a POISON CENTER or doctor.  
P391: Collect spillage.

• Storage

: P405: Store locked up.

• Disposal considerations

: P501: Dispose of this material and its container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

**2.3. Other hazards**

Other hazards

: The substance does not fulfil the criteria to be identified as PBT substance or vPvB substance according to Annex XIII of Regulation REACH.


**3. Composition/information on ingredients**

Substance / Preparation

: 1,10-PHENANTHROLINEAR 99.5%  
CAS No :5144-89-8  
Substance.

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### 3. Composition/information on ingredients (continued)

Contains no other components or impurities which will influence the classification of the product.

### 4. First aid measures

#### 4.1. Description of first aid measures

- Inhalation** : Assure fresh air breathing. Allow the victim to rest.
- Skin contact** : Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.
- Eye contact** : Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persist.
- Ingestion** : Immediately call a POISON CENTER or doctor. Specific treatment (see on this label). Do NOT induce vomiting. Rinse mouth.

#### 4.2. Most important symptoms and effects, both acute and delayed

- Symptoms relating to use** : Swallowing a small quantity of this material will result in serious health hazard.

#### 4.3. Indication of any immediate medical attention and special treatment needed

- General information** : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

### 5. Fire-fighting measures

#### 5.1. Extinguishing media

- Suitable extinguishing media** : Foam. Dry powder. Carbon dioxide. Water spray. Sand.
- Unsuitable extinguishing media** : Do not use a heavy water stream.
- Surrounding fires** : Use water spray or fog for cooling exposed containers.

#### 5.2. Special hazards arising from the substance or mixture


- Hazardous combustion products** : Under fire conditions, hazardous fumes will be present.

#### 5.3. Advice for fire-fighters

- Protection against fire** : Do not enter fire area without proper protective equipment, including respiratory protection.
- Special procedures** : Exercise caution when fighting any chemical fire. Avoid (reject) fire-fighting water to enter environment.

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## 6. Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

**For emergency responders** : Equip cleanup crew with proper protection.  
Ventilate area.

**For non-emergency personnel** : Evacuate unnecessary personnel.

### 6.2. Environmental precautions

**Environmental precautions** : Prevent entry to sewers and public waters. Notify authorities if product enters sewers or public waters.  
Avoid release to the environment.

### 6.3. Methods and material for containment and cleaning up

**Clean up methods** : On land, sweep or shovel into suitable containers. Minimize generation of dust.  
Store away from other materials.

### 6.4. Reference to other sections

See section 8. Exposure controls/personal protection

## 7. Handling and storage

### 7.1. Precautions for safe handling

**Handling** : Do not eat, drink or smoke when using this product. Wash thoroughly after handling.

**Technical protective measures** : Provide good ventilation in process area to prevent formation of vapour.

### 7.2. Conditions for safe storage, including any incompatibilities

**Storage** : Keep only in the original container in a cool, well ventilated place. Keep container closed when not in use.

**Storage - away from** : Strong bases. Strong acids. Sources of ignition. Direct sunlight.

### 7.3. Specific end use(s)

**Specific end use(s)** : None.

## 8. Exposure controls/personal protection

### 8.1. Exposure controls

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## 8. Exposure controls/personal protection (continued)

<b>Personal protection</b>	: Avoid all unnecessary exposure.
• <b>Respiratory protection</b>	: Wear approved mask.
• <b>Hand protection</b>	: Wear protective gloves.
• <b>Eye protection</b>	: Chemical goggles or safety glasses.
• <b>Others</b>	: When using, do not eat, drink or smoke.

### 8.2. Control parameters

<b>Occupational Exposure Limits</b>	: No data available.
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## 9. Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

<b>Physical state at 20 °C</b>	: Solid.
<b>Colour</b>	: White powder
<b>Odour</b>	: N/A
<b>Odour threshold</b>	: No data available.
<b>pH value</b>	: Not applicable.
<b>Melting point [°C]</b>	: 88 °C
<b>Decomposition point [°C]</b>	: N/A
<b>Critical temperature [°C]</b>	: N/A
<b>Auto-ignition temperature [°C]</b>	: N/A
<b>Flammability (solid, gas)</b>	: N/A
<b>Flash point [°C]</b>	: N/A
<b>Boiling point [°C]</b>	: N/A
<b>Initial boiling point [°C]</b>	: N/A
<b>Final boiling point [°C]</b>	: N/A
<b>Evaporation rate</b>	: N/A
<b>Vapour pressure [20°C]</b>	: N/A
<b>Vapour pressure mm/Hg</b>	: N/A
<b>Vapour density</b>	: 6,2
<b>Density [g/cm<sup>3</sup>]</b>	: N/A
<b>Relative density, gas (air=1)</b>	: N/A
<b>Relative density, liquid (water=1)</b>	: N/A
<b>Solubility in water [% weight]</b>	: Soluble in water
<b>Solubility in water</b>	: N/A
<b>Log Pow octanol / water at 20°C</b>	: No data available.
<b>Solubility</b>	: N/A

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## 9. Physical and chemical properties (continued)

Viscosity at 40°C [mm<sup>2</sup>/s] : N/A

### 9.2. Other information

Explosive properties : N/A  
 Explosion limits - upper [%] : N/A  
 Explosion limits - lower [%] : N/A  
 Oxidising properties : No data available.

## 10. Stability and reactivity

### 10.1. Reactivity

Reactivity : Not established.

### 10.2. Chemical stability

Chemical stability : Stable under recommended storage conditions.

### 10.3. Possibility of hazardous reactions

Hazardous reactions : Not established.

### 10.4. Conditions to avoid

Conditions to avoid : Direct sunlight. Extremely high or low temperatures.

### 10.5. Incompatible materials

Materials to avoid : Strong acids. Strong bases.

### 10.6. Hazardous decomposition products

Hazardous decomposition products : Fumes. Carbon monoxide. Carbon dioxide.

## 11. Toxicological information

### 11.1. Information on toxicological effects

#### Acute toxicity

- Inhalation : Based on available data, the classification criteria are not met.
- Dermal : Based on available data, the classification criteria are not met.
- Ingestion : Toxic if swallowed.

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### 11. Toxicological information (continued)

<b>Corrosion</b>	: Based on available data, the classification criteria are not met.
<b>Irritation</b>	: Based on available data, the classification criteria are not met.
<b>Sensitization</b>	: Based on available data, the classification criteria are not met.
<b>Mutagenicity</b>	: Based on available data, the classification criteria are not met.
<b>Carcinogenicity</b>	: Based on available data, the classification criteria are not met.
<b>Toxic for reproduction</b>	: Based on available data, the classification criteria are not met.
<b>STOT-single exposure</b>	: Based on available data, the classification criteria are not met.
<b>STOT-repeated exposure</b>	: Based on available data, the classification criteria are not met.
<b>Aspiration hazard</b>	: Based on available data, the classification criteria are not met.

### 12. Ecological information

#### 12.1. Toxicity

**Toxicity information** : Very toxic to aquatic life with long lasting effects.

#### 12.2. Persistence - degradability

**Persistence - degradability** : May cause long-term adverse effects in the environment.

#### 12.3. Bioaccumulative potential

**Bioaccumulative potential** : Not established.

#### 12.4. Mobility in soil

**Mobility in soil** : Not established.

#### 12.5. Results of PBT and vPvB assessment

**Results of PBT and vPvB assessment** : The substance does not fulfil the criteria to be identified as PBT substance or vPvB substance according to Annex XIII of Regulation REACH.

#### 12.6. Other adverse effects

**Environmental precautions** : Avoid release to the environment.

### 13. Disposal considerations

#### 13.1. Waste treatment methods

**General** : Avoid release to the environment. Dispose in a safe manner in accordance with local/national regulations.  
Dispose of this material and its container to hazardous or special waste collection

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### 13. Disposal considerations (continued)

Special precautions : point, in accordance with local, regional, national and/or international regulation.  
: Hazardous waste due to toxicity.

### 14. Transport information

#### 14.1. Land transport (ADR-RID)

UN N° : 2811  
H.I. nr : 60  
ADR - Class : 6.1  
Labelling - Transport : 6.1 : Toxic substances.



ADR - Classification code : T2  
ADR - Group : III

#### 14.2. Sea transport (IMDG) [English only]

UN N° : 2811  
IMO-IMDG - Class or division : 6.1 : Toxic substances.  
IMO-IMDG - Packing group : III

#### 14.3. Air transport (ICAO-IATA) [English only]

UN N° : 2811  
IATA - Class or division : 6.1 : Toxic substances.  
IATA - Packing group : III

### 15. Regulatory information

#### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture


Safety, health and environmental regulations/legislation specific for the substance or mixture : Ensure all national/local regulations are observed.  
REACH Restrictions - Annex XVII : The components of this product are not subject to restrictions.  
REACH Authorisation - Annex XIV : The components of this product are not subject to authorization.

#### 15.2. Chemical Safety Assessment

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#### 15. Regulatory information (continued)

**Chemical Safety Assessment** : It has not been carried out.

#### 16. Other information

**Revision** : Revision - See : \*

**Abbreviations and acronyms** : PBT: persistent, bioaccumulative and toxic.  
vPvB: very persistent and very bioaccumulative

**Sources of key data used** : REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006

**Further information** : None.

In accordance with REACH Regulation (CE) N° 1907/2006 and with CLP Regulation (CE) N° 1272/2008

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