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

1.1. Product identifier

Trade name : FERROIN SOLUTION AR 0.025 M
Product code : 03845

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 : R52-53

Hazard Class and Category Code(s), Regulation (EC) No 1272/2008 (CLP)
Environmental hazards : Hazardous to the aquatic environment - Chronic hazard - Category 3 (CLP : Aquatic Chronic 3) H412

2.2. Label elements

Labelling EC 67/548 or EC 1999/45
Symbol(s) : None.
R Phrase(s) : R52/53 : Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
S Phrase(s) : S35 : This material and its container must be disposed of in a safe way.
S59 : Refer to manufacturer/supplier for information on recovery/recycling.
S61 : Avoid release to the environment. Refer to special instructions/Safety data

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
2. Hazards identification -DSD (continued)

Contains:
Water - 1,10-phenanthroline - Iron (II) sulfate (1:1) heptahydrate

Labelling Regulation EC 1272/2008 (CLP)

Hazard pictograms

Signal words: None.

Hazard statements: H412: Harmful to aquatic life with long lasting effects.

Precautionary statements:
• Prevention: P273: Avoid release to the environment.
• 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.

Contains:
Water - 1,10-phenanthroline - Iron (II) sulfate (1:1) heptahydrate

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

<table>
<thead>
<tr>
<th>Substance / Preparation</th>
<th>Hazardous component(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Preparation.</td>
</tr>
<tr>
<td></td>
<td>This product is hazardous.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Substance name</th>
<th>Contents</th>
<th>CAS No</th>
<th>EC No</th>
<th>Annex No</th>
<th>REACH Ref.</th>
<th>Classification</th>
</tr>
</thead>
</table>
| Iron (II) sulfate (1:1) heptahydrate | > 0.01 < 1 % | 7782-63-0 | 231-753-5 | 026-003-01-4 | ---- | Xn, R22  
  Xl, R36/38  
  Acute Tox. 4 (oral)  
  H302  
  Eye Irr 2  
  H319  
  Skin Irr 2  
  H315 |
| 1,10-phenanthroline    | > 1 < 5 %      | 66-71-7  | 200-629-2 | 613-092-00-8 | ---- | T; R25  
  N; R50-53  
  Acute Tox. 3 (oral)  
  H301  
  Aquatic Acute 1  
  H400  
  Aquatic Chronic 1  
  H410 |
| Water                  | > 75 < 99 %    | 7732-18-5 | 231-791-2 | ---- | ---- | Not classified (DSD/DPD) |
|                        |               |          |         |          |            | Not classified (GHS) |

4. First aid measures

4.1. Description of first aid measures

Inhalation: Assure fresh air breathing. Allow the victim to rest.
4. First aid measures (continued)

<table>
<thead>
<tr>
<th>Condition</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin contact</td>
<td>Remove affected clothing and wash all exposed skin area with mild soap and</td>
</tr>
<tr>
<td></td>
<td>water, followed by warm water rinse.</td>
</tr>
<tr>
<td>Eye contact</td>
<td>Rinse immediately with plenty of water. Obtain medical attention if pain,</td>
</tr>
<tr>
<td></td>
<td>blinking or redness persist.</td>
</tr>
<tr>
<td>Ingestion</td>
<td>Obtain emergency medical attention. Rinse mouth. Do NOT induce vomiting.</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Symptoms relating to use</td>
<td>Not expected to present a significant hazard under anticipated conditions of normal use.</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>General information</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Never give anything by mouth to an unconscious person. If you feel unwell,</td>
</tr>
<tr>
<td></td>
<td>seek medical advice (show the label where possible).</td>
</tr>
</tbody>
</table>

5. Fire-fighting measures

5.1. Extinguishing media

<table>
<thead>
<tr>
<th>Media</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unsuitable</td>
<td>Do not use a heavy water stream.</td>
</tr>
<tr>
<td>Surrounding fires</td>
<td>Use water spray or fog for cooling exposed containers.</td>
</tr>
</tbody>
</table>

5.2. Special hazards arising from the substance or mixture

<table>
<thead>
<tr>
<th>Hazardous</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>combustion products</td>
<td>Under fire conditions, hazardous fumes will be present.</td>
</tr>
</tbody>
</table>

5.3. Advice for fire-fighters

<table>
<thead>
<tr>
<th>Protection</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>against fire</td>
<td>Do not enter fire area without proper protective equipment, including</td>
</tr>
<tr>
<td></td>
<td>respiratory protection.</td>
</tr>
<tr>
<td>Special procedures</td>
<td>Exercise caution when fighting any chemical fire. Avoid (reject) fire-fighting water to</td>
</tr>
<tr>
<td></td>
<td>enter environment.</td>
</tr>
</tbody>
</table>

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

<table>
<thead>
<tr>
<th>Condition</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>For emergency</td>
<td>Equip cleanup crew with proper protection. Ventilate area.</td>
</tr>
<tr>
<td>responders</td>
<td></td>
</tr>
<tr>
<td>For non-emergency</td>
<td>Evacuate unnecessary personnel.</td>
</tr>
<tr>
<td>personnel</td>
<td></td>
</tr>
</tbody>
</table>

6.2. Environmental precautions
6. Accidental release measures (continued)

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: Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. 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: Wash hands and other exposed areas with mild soap and water before eat, drink or smoke and when leaving work.

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.


7.3. Specific end use(s)

Specific end use(s): None.

8. Exposure controls/personal protection

8.1. Exposure controls

Personal protection: Avoid all unnecessary exposure.

• Respiratory protection: Wear approved mask.

• Hand protection: Wear protective gloves.

• Eye protection: Chemical goggles or safety glasses.

• Others: When using, do not eat, drink or smoke.

8.2. Control parameters
8. Exposure controls/personal protection  (continued)

Occupational Exposure Limits  : No data available.

9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state at 20 °C  : Liquid.
Colour  : Colorless
Odour  : Characteristic.
Odour threshold  : No data available.
pH value  : No data available.
Melting point [°C]  : No data available.
Decomposition point [°C]  : N/A
Critical temperature [°C]  : No data available.
Auto-ignition temperature [°C]  : No data available.
Flammability (solid, gas)  : N/A
Flash point [°C]  : No data available.
Boiling point [°C]  : N/A
Initial boiling point [°C]  : No data available.
Final boiling point [°C]  : No data available.
Evaporation rate  : N/A
Vapour pressure [20°C]  : No data available.
Vapour pressure mm/Hg  : N/A
Vapour density  : N/A
Density [g/cm3]  : 1.006
Relative density, gas (air=1)  : N/A
Relative density, liquid (water=1)  : N/A
Solubility in water [% weight]  : Soluble in water
Solubility in water  : No data available.
Log Pow octanol / water at 20°C  : No data available.
Solubility  : N/A
Viscosity at 40°C [mm2/s]  : No data available.

9.2. Other information

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


11. Toxicological information

11.1. Information on toxicological effects

Toxicity information: The product has been not fully tested. The calculated risk has been done under the requirements of the EU regulations.

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: Based on available data, the classification criteria are not met.
Corrosion: Based on available data, the classification criteria are not met.
Irritation: Based on available data, the classification criteria are not met.
Sensitization: Based on available data, the classification criteria are not met.
Mutagenicity: Based on available data, the classification criteria are not met.
Carcinogenicity: Based on available data, the classification criteria are not met.
Toxic for reproduction: Based on available data, the classification criteria are not met.
STOT-single exposure: Based on available data, the classification criteria are not met.
STOT-repeated exposure: Based on available data, the classification criteria are not met.
## 11. Toxicological information (continued)

**Aspiration hazard**: Based on available data, the classification criteria are not met.

## 12. Ecological information

### 12.1. Toxicity

**Toxicity information**: Harmful 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 point, in accordance with local, regional, national and/or international regulation.

## 14. Transport information

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

**General information**: Not regulated.
14. Transport information (continued)

14.2. Sea transport (IMDG) [English only]

General information : Not regulated.

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

General information : Not regulated.

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

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

List of relevant R phrases (heading 3) : R22 : Harmful if swallowed.
                                         R25 : Toxic if swallowed.
                                         R36/38 : Irritating to eyes and skin.
                                         R50/53 : Very toxic to aquatic organisms, may cause long-term adverse effects in
                                                  the aquatic environment.

List of full text of H-statements in section 3 : H301 : Toxic if swallowed.
                                            H302 : Harmful if swallowed.
                                            H315 : Causes skin irritation.
                                            H319 : Causes serious eye irritation.
                                            H400 : Very toxic to aquatic life.
                                            H410 : Very toxic to aquatic life with long lasting effects.

Further information : None.

In accordance with REACH Regulation (CE) Nº 1907/2006 and with CLP Regulation (CE) Nº 1272/2008

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
DISCLAIMER OF LIABILITY  The information in this SDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This MSDS was prepared and is to be used only for this product. If the product is used as a component in another product, this MSDS information may not be applicable.