

CHAITANYA CHS, 2nd FLOOR, OFFICE # 206, SIDDHARTH NAGAR, S.V.ROAD, GOREGAON (W), MUMBAI 400062, MH, INDIA.
 CONTACT: +9122 28725393 /94/ 95 | EMAILID: CARE@SUVCHEM.COM

MATERIAL SAFETY DATA SHEET (MSDS)

FERROIN SOLUTION 0.025 M (REDOX INDICATOR)

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

1.1. Product identifier

Trade name : FERROIN SOLUTION 0.025 M (REDOX INDICATOR)

Product code : SI0304400500
 CAS No: N/A

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 : SUVCHEM
 Chaitanya Tower, 2nd Floor, Office # 206,
 Siddharth Nagar, S.V. Road,
 Goregaon (West), Mumbai - 400062,
 Maharashtra, India.
 Contact: +91 22 28725393 / 94 / 95
 Email ID: info@suvchem.com/care@suvchem.com

1.4. Emergency telephone number

Phone no. : + 91 22 28725393 / 94 / 95 (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

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FERROIN SOLUTION 0.025 M (REDOX INDICATOR)

2. Hazards identification -DSD (continued)

	sheets.
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.
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3. Composition/information on ingredients

Substance / Preparation		: Preparation.				
Hazardous component(s)		: This product is hazardous.				
Substance name	Contents	CAS No	EC No	Annex No	REACH Ref.	Classification
Iron (II) sulfate (1:1) heptahydrate :	> 0.01 < 1 %	7782-63-0	231-753-5	026-003-01-4	----	Xn; R22 Xi; R36/38 Acute Tox. 4 (oral) _ H302 Eye irrit 2 _ H319 Skin Irrit. 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.
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MATERIAL SAFETY DATA SHEET (MSDS)

FERROIN SOLUTION 0.025 M (REDOX INDICATOR)

4. First aid measures (continued)

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	: Obtain emergency medical attention. Rinse mouth. Do NOT induce vomiting.

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

Symptoms relating to use	: Not expected to present a significant hazard under anticipated conditions of normal use.
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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).
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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.
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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.

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

MATERIAL SAFETY DATA SHEET (MSDS)

FERROIN SOLUTION 0.025 M (REDOX INDICATOR)

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.

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

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

MATERIAL SAFETY DATA SHEET (MSDS)

FERROIN SOLUTION 0.025 M (REDOX INDICATOR)

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/cm ³]	: 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 [mm ² /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.

MATERIAL SAFETY DATA SHEET (MSDS)

FERROIN SOLUTION 0.025 M (REDOX INDICATOR)

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

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.

MATERIAL SAFETY DATA SHEET (MSDS)
FERROIN SOLUTION 0.025 M (REDOX INDICATOR)**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.

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FERROIN SOLUTION 0.025 M (REDOX INDICATOR)

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 1999/45/EC, and amending Regulation (EC) No 1907/2006

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.

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

DISCLAIMER:

- **SUVCHEM** Products are to be used as Lab Chemicals for R&D only. Not for drug, medicinal, household or other uses.
- **SUVCHEM** shall not be responsible for any damage resulting from handling or from contact with the above product.
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