

CHAITANYA CHS, 2<sup>nd</sup> 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 : SI0304400100  
 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

CHAITANYA CHS, 2<sup>nd</sup> 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)

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

	sheets.
<b>Contains</b>	: Water - 1,10-phenanthroline - Iron (II) sulfate (1:1) heptahydrate
<b>Labelling Regulation EC 1272/2008 (CLP)</b>	
<b>Hazard pictograms</b>	
<b>Signal words</b>	: None.
<b>Hazard statements</b>	: H412 : Harmful to aquatic life with long lasting effects.
<b>Precautionary statements</b>	
• <b>Prevention</b>	: P273: Avoid release to the environment.
• <b>Disposal considerations</b>	: 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.
<b>Contains</b>	: Water - 1,10-phenanthroline - Iron (II) sulfate (1:1) heptahydrate

#### 2.3. Other hazards

<b>Other hazards</b>	: 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

<b>Substance / Preparation</b>		: Preparation.				
<b>Hazardous component(s)</b>		: 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

<b>Inhalation</b>	: Assure fresh air breathing. Allow the victim to rest.
-------------------	---

## 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.

#### 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.

#### 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 <sup>3</sup> ]	: 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 <sup>2</sup> /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.



## MATERIAL SAFETY DATA SHEET (MSDS)

### 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.



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

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.
- **SUVCHEM** provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product.

**End of document**