

# SAFETY DATA SHEET



## Ferrous Chloride Solution

### 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

#### GHS Product Information

**Product Name:** Ferrous Chloride Solution  
**Business Unit** Phibro-Tech Inc  
**Other means of identification:** Not available  
  
**Safety data sheet number:** 3074-310 -US-E

#### Recommended use of the chemical and restrictions on use

**Recommended use:** No information available.  
  
**Uses advised against:** No information available

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

#### **Supplier:**

Phibro-Tech, Inc.  
Glenpointe Centre East, 3rd FL  
300 Frank W. Burr Blvd., Ste 21  
Teaneck, NJ 07666-6712  
Tel: (201) 329-7300  
Toll free: (888) 475-7355  
Fax: (201) 329-7070  
Toll Free: 888-475-7355

**SDS Contact (email of responsible person):** phibroehs@pahc.com

**24 Hour Emergency Phone Number:** Chemtrec 1-800-424-9300 (CCN17224)

**International:** International Number: +1 703-527-3887

### 2. HAZARDS IDENTIFICATION

#### Classification

#### **OSHA Regulatory Status**

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute toxicity - Oral	Category 4
Skin corrosion/irritation	Category 1 Sub-category B

#### Label elements

#### Emergency Overview

Danger

**Hazard statements**

Harmful if swallowed

Causes severe skin burns and eye damage

**Appearance** cloudy**Physical state** liquid**Odor** Slight Hydrogen chloride (HCl)**Precautionary Statements - Prevention**

Wash face, hands and any exposed skin thoroughly after handling

Do not eat, drink or smoke when using this product

Do not breathe dust/fume/gas/mist/vapors/spray

Wear protective gloves/protective clothing/eye protection/face protection

**Precautionary Statements - Response**

Immediately call a POISON CENTER or doctor/physician

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

Immediately call a POISON CENTER or doctor/physician

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower

Wash contaminated clothing before reuse

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

Immediately call a POISON CENTER or doctor/physician

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell

Rinse mouth

Do NOT induce vomiting

**Precautionary Statements - Storage**

Store locked up

**Precautionary Statements - Disposal**

Dispose of contents/ container to an approved landfill

**Hazards not otherwise classified (HNOC)****Other Information****Other hazards**

- Toxic to aquatic life with long lasting effects
- Harmful to aquatic life

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Pure substance/mixture

Mixture

Chemical Name	CAS No	Weight-%	Trade Secret
Ferrous chloride	7758-94-3	15 - 40	*
Hydrogen chloride	7647-01-0	3 - 7	*

\*The exact percentage (concentration) of composition has been withheld as a trade secret.

### 4. FIRST AID MEASURES

**First aid measures**

**General advice:** Call 911 or emergency medical service. Remove and isolate contaminated clothing and shoes.

**Eye contact:** In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes.

**Inhalation:** Move victim to fresh air. If breathing is irregular or stopped, administer artificial respiration. Administer oxygen if breathing is difficult.

**Skin Contact:** For minor skin contact, avoid spreading material on unaffected skin.

**Ingestion:** Do NOT induce vomiting. Call a physician immediately. Never give anything by mouth to an unconscious person.

**Self-protection of the first aider:** Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

**Most important symptoms and effects, both acute and delayed**

**Symptoms:** No information available.

**Indication of any immediate medical attention and special treatment needed**

**Note to physicians:** Keep victim warm and quiet. Effects of exposure (inhalation, ingestion or skin contact) to substance may be delayed.

**5. FIRE-FIGHTING MEASURES**

**Extinguishing media**

**Suitable extinguishing media:** Dry chemical, CO2 or water spray. Dry chemical, CO2, alcohol-resistant foam or water spray. Move containers from fire area if you can do it without risk. Dike fire control water for later disposal; do not scatter the material.

**Unsuitable extinguishing media:** Caution: Use of water spray when fighting fire may be inefficient.

**Specific hazards arising from the chemical:** Some are oxidizers and may ignite combustibles (wood, paper, oil, clothing, etc.).

**Explosion data**

**Sensitivity to Mechanical Impact:** None.

**Sensitivity to Static Discharge:** None.

**Protective equipment and precautions for firefighters:** As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

**6. ACCIDENTAL RELEASE MEASURES**

**Personal precautions, protective equipment and emergency procedures**

**Personal precautions:** ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Stop leak if you can do it without risk.

**Other Information** Do not get water inside containers or in contact with substance.

**For emergency responders:** Use personal protection recommended in Section 8. Use personal protective equipment as required.

**Environmental Precautions:** Prevent entry into waterways, sewers, basements or confined areas. See Section 12 for additional ecological information.

**Methods and material for containment and cleaning up**

**Methods for containment:** Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers.

**Methods for cleaning up:** Cover liquid spill with sand, earth or other non-combustible absorbent material. Cover powder spill with plastic sheet or tarp to minimize spreading. Pick up and transfer to properly labeled containers.

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**7. HANDLING AND STORAGE**

**Precautions for safe handling**

**Advice on safe handling:** Avoid contact with skin, eyes or clothing. Use personal protective equipment as required. Wash contaminated clothing before reuse. Do not breathe dust/fume/gas/mist/vapors/spray. Do not eat, drink or smoke when using this product.

**Conditions for safe storage, including any incompatibilities**

**Storage Conditions:** Keep container tightly closed in a dry and well-ventilated place. Keep out of the reach of children.

**Incompatible materials:** None known based on information supplied.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

**Control parameters**

**Exposure Guidelines**

Chemical Name	CAS No	ACGIH TLV	OSHA PEL	NIOSH IDLH
Ferrous chloride	7758-94-3	TWA: 1 mg/m <sup>3</sup> Fe	(vacated) TWA: 1 mg/m <sup>3</sup> Fe	TWA: 1 mg/m <sup>3</sup> Fe

Hydrogen chloride	7647-01-0	Ceiling: 2 ppm	(vacated) Ceiling: 5 ppm (vacated) Ceiling: 7 mg/m <sup>3</sup> Ceiling: 5 ppm Ceiling: 7 mg/m <sup>3</sup>	IDLH: 50 ppm Ceiling: 5 ppm Ceiling: 7 mg/m <sup>3</sup>
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NIOSH IDLH *Immediately Dangerous to Life or Health*

**Other Information:** Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

**Appropriate engineering controls**

**Engineering Controls:** Showers  
Eyewash stations  
Ventilation systems.

**Individual protection measures, such as personal protective equipment**

**General Hygiene Considerations:** Handle in accordance with good industrial hygiene and safety practice.

**Eye/face protection:** Tight sealing safety goggles.

**Skin and body protection:** No special technical protective measures are necessary.

**Respiratory protection:** If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

**Information on basic physical and chemical properties**

<b>Physical state</b>	liquid	<b>Odor</b>	Slight Hydrogen chloride (HCl)
<b>Appearance</b>	cloudy	<b>Odor threshold</b>	No information available
<b>Color</b>	No information available		

<b><u>Property</u></b>	<b><u>Values</u></b>	<b><u>Remarks • Method</u></b>
pH	1-4	
Melting Point / Freezing Point	No information available	
Boiling point / boiling range	No information available	
Flash point	No information available	
Evaporation rate	No information available	
Flammability (solid, gas)	No information available	
Flammability Limit in Air		
Upper flammability limit:	No information available	
Lower flammability limit:	No information available	
Vapor pressure	No information available	
Vapor density	No information available	
Specific Gravity	No information available	
Water solubility	No information available	
Solubility in other solvents	No information available	
Partition coefficient	No information available	
Autoignition temperature	No information available	
Decomposition temperature	No information available	
Kinematic viscosity	No information available	
Dynamic viscosity	No information available	
Explosive properties	No information available	
Oxidizing properties	No information available	

**Other Information**

Softening point No information available  
 Molecular weight No information available  
 VOC Content (%) No information available  
 Density No information available  
 Bulk density No information available  
 Percent Volatile No information available

## 10. STABILITY AND REACTIVITY

### Reactivity

No data available

### Chemical stability

Stable under recommended storage conditions.

### Possibility of Hazardous Reactions

None under normal processing.

### Conditions to avoid

Extremes of temperature and direct sunlight.

### Incompatible materials

None known based on information supplied.

### Hazardous Decomposition Products

None known based on information supplied.

## 11. TOXICOLOGICAL INFORMATION

### Information on likely routes of exposure

Product Information: No data available  
 Inhalation: No data available.  
 Eye contact: No data available.  
 Skin Contact: No data available.  
 Ingestion: No data available.

Chemical Name	CAS No	Oral LD50	Dermal LD50	Inhalation LC50
Ferrous chloride	7758-94-3	= 450 mg/kg ( Rat )	-	-
Hydrogen chloride	7647-01-0	= 700 mg/kg ( Rat )	> 5010 mg/kg ( Rabbit )	= 3124 ppm ( Rat ) 1 h

### Information on toxicological effects

Symptoms: No information available.

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization: No information available.  
 Germ cell mutagenicity: No information available.  
 Carcinogenicity: The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical Name	CAS No	ACGIH	IARC	NTP	OSHA
Hydrogen chloride	7647-01-0	-	Group 3	-	-

*IARC (International Agency for Research on Cancer)  
 Not classifiable as a human carcinogen*

Reproductive toxicity: No information available.  
 STOT - single exposure: No information available.

STOT - repeated exposure: No information available.  
 Chronic toxicity: May cause adverse liver effects.  
 Target Organ Effects: Eyes, Gastrointestinal tract (GI), liver, Respiratory system, Skin.  
 Aspiration hazard: No information available.

**Numerical measures of toxicity - Product Information**

The following values are calculated based on chapter 3.1 of the GHS document .

ATEmix (oral) 1101 mg/kg  
 ATEmix (inhalation-dust/mist) 8.4 mg/l 1128

**12. ECOLOGICAL INFORMATION**

**Ecotoxicity**

Toxic to aquatic life with long lasting effects

0% of the mixture consists of component(s) of unknown hazards to the aquatic environment

Chemical Name	CAS No	Algae/aquatic plants	Fish	Crustacea
Ferrous chloride	7758-94-3	-	4: 96 h Morone saxatilis mg/L LC50 static	-
Hydrogen chloride	7647-01-0	-	282: 96 h Gambusia affinis mg/L LC50 static	-

**Persistence and degradability**

No information available.

**Bioaccumulation**

No information available.

**Mobility**

No information available.

**Other adverse effects:** No information available

**13. DISPOSAL CONSIDERATIONS**

**Waste treatment methods**

**Disposal of wastes:** Refer to all federal, state and local regulations prior to disposal of container and unused contents by reuse, recycle or disposal. Disposal should be in accordance with applicable regional, national and local laws and regulations. Avoid runoff to waterways and sewers. Recover or recycle if possible. Send to a licensed recycler, reclaimer or incinerator.

**Disposal methods:** Do not reuse container.

**14. TRANSPORT INFORMATION**

**Note:** Store in a closed container. Keep container upright.

**DOT**

UN/ID no NA1760  
 Proper shipping name Ferrous Chloride, Solution ( )  
 Hazard Class 8  
 Packing Group II  
 Description NA1760, Ferrous Chloride Solution , 8, II  
 Emergency Response Guide Number 154

IATA Not Applicable ( )IMDG Not Applicable ( )**15. REGULATORY INFORMATION****International Inventories**

TSCA: Complies  
 DSL/NDSL: Complies  
 EINECS/ELINCS: Complies  
 ENCS: Not Determined  
 IECS: Complies  
 KECL: Complies  
 PICCS: Complies  
 AICS: Complies

**Legend:**

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory  
 DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List  
 EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances  
 ENCS - Japan Existing and New Chemical Substances  
 IECS - China Inventory of Existing Chemical Substances  
 KECL - Korean Existing and Evaluated Chemical Substances  
 PICCS - Philippines Inventory of Chemicals and Chemical Substances  
 AICS - Australian Inventory of Chemical Substances

**US Federal Regulations****SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	CAS No	SARA 313 - Threshold Values %
Hydrogen chloride	7647-01-0	1.0

**SARA 311/312 Hazard Categories**

Acute health hazard Yes  
 Chronic Health Hazard No  
 Fire hazard No  
 Sudden release of pressure hazard No  
 Reactive Hazard No

**CWA (Clean Water Act)**

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical Name	CAS No	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Ferrous chloride	7758-94-3	100 lb	-	-	X
Hydrogen chloride	7647-01-0	5000 lb	-	-	X

**CERCLA**

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Chemical Name	CAS No	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Ferrous chloride	7758-94-3	100 lb	-	RQ 100 lb final RQ RQ 45.4 kg final RQ
Hydrogen chloride	7647-01-0	5000 lb	5000 lb	RQ 5000 lb final RQ RQ 2270 kg final RQ



**FIFRA**

Not applicable

**US State Regulations**

**California Proposition 65**

This product does not contain any Proposition 65 chemicals

**U.S. State Right-to-Know Regulations**

No information available

Chemical Name	CAS No	New Jersey	Massachusetts	Pennsylvania
Ferrous chloride	7758-94-3	X	X	X
Hydrogen chloride	7647-01-0	X	X	X

**Canada**

No information available

**16. OTHER INFORMATION**

<b><u>NFPA</u></b>	Health hazards 3	Flammability 0	Instability 0	Physical & Chemical Properties 0
<b><u>HMIS</u></b>	Health hazards 3	Flammability 0	Physical hazards 0	Personal protection D

**Document Review**

Revision Number: 2

Revision Note: No information available

Key or legend to abbreviations and acronyms used in the safety data sheet:

- Bioconcentration factor (BCF)
- International Air Transport Association (IATA)
- Globally Harmonized System (GHS)
- International Maritime Dangerous Goods (IMDG)

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