

# SAFETY DATA SHEET



Revision date: 15-Aug-2023

Revision Number 3

## 1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

### Product identifier

**Product Name** FERROUS CHLORIDE TETRAHYDRATE

**Product Code(s)** 000000018709

### Other means of identification

**UN number** 3260

**Synonyms** Iron chloride tetrahydrate; Iron (II) chloride tetrahydrate; Ferrous chloride 4-hydrate.

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

**Recommended use** Water treatment chemical.

**Uses advised against** No information available

### Supplier

Ixom Operations Pty Ltd  
ABN: 51 600 546 512  
Level 8, 1 Nicholson Street  
Melbourne 3000  
Australia

Telephone Number: +61 3 9906 3000

### Emergency telephone number

Emergency telephone number **1 800 033 111 (ALL HOURS)**

Please ensure you refer to the limitations of this Safety Data Sheet as set out in the "Other Information" section at the end of this Data Sheet.

## 2. HAZARDS IDENTIFICATION

### GHS Classification

Classified as dangerous goods in accordance with the Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG).

Classified as a hazardous chemical in accordance with the criteria of Safe Work Australia - Globally Harmonized System (GHS).

<b>Corrosive to metals</b>	Category 1
<b>Acute toxicity - Oral</b>	Category 4
<b>Skin corrosion/irritation</b>	Category 1 Sub-category C
<b>Serious eye damage/eye irritation</b>	Category 1

### **SIGNAL WORD**

Danger

**Label elements**Corrosion  
Exclamation mark**Hazard statements**

H290 - May be corrosive to metals  
 H302 - Harmful if swallowed  
 H314 - Causes severe skin burns and eye damage

**Precautionary Statements - Prevention**

Keep only in original container  
 Do not breathe mist, vapours, spray.  
 Wash face, hands and any exposed skin thoroughly after handling  
 Wash eyes thoroughly after handling.  
 Do not eat, drink or smoke when using this product  
 Wear protective gloves / protective clothing / eye protection / face protection

**Precautionary Statements - Response**

Specific treatment (see First aid on this SDS)  
 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: Rinse mouth. DO NOT induce vomiting  
 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell  
 Absorb spillage to prevent material damage

**Precautionary Statements - Storage**

Store locked up  
 Store in corrosive resistant container with a resistant inner liner

**Precautionary Statements - Disposal**

Dispose of contents/container in accordance with local, regional, national, and international regulations as applicable

**Other hazards which do not result in classification**

Poisons Schedule (SUSMP) None allocated

**3. COMPOSITION/INFORMATION ON INGREDIENTS****Substance**

Chemical name	CAS No.	Weight-%
Iron (II) chloride tetrahydrate	13478-10-9	>=98.0

**4. FIRST AID MEASURES****Description of first aid measures****General advice**

For advice, contact a Poisons Information Centre (e.g. phone Australia 13 11 26; New Zealand 0800 764 766) or a doctor.

**Inhalation**

Remove to fresh air. If breathing is difficult, (trained personnel should) give oxygen. Call a

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	physician if symptoms occur.
<b>Eye contact</b>	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
<b>Skin contact</b>	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash off immediately with plenty of water for at least 15 minutes. Immediately call a POISON CENTER or doctor/physician.
<b>Ingestion</b>	Rinse mouth thoroughly with water. Do NOT induce vomiting. Drink 1 or 2 glasses of water. Never give anything by mouth to an unconscious person. Get immediate medical advice/attention.

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

<b>Symptoms</b>	Irritation/Corrosion. May cause redness and tearing of the eyes. Erythema (skin redness). Burning.
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**Indication of any immediate medical attention and special treatment needed**

<b>Note to physicians</b>	Treat symptomatically. Can cause corneal burns.
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**5. FIRE FIGHTING MEASURES****Suitable Extinguishing Media**

<b>Suitable Extinguishing Media</b>	Dry chemical, CO <sub>2</sub> , water spray or alcohol-resistant foam.
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<b>Unsuitable extinguishing media</b>	High volume water jet.
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**Specific hazards arising from the chemical**

<b>Specific hazards arising from the chemical</b>	Corrosive hazard. Wear protective gloves/clothing and eye/face protection. Cool drums with water spray.
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**Special protective actions for fire-fighters**

<b>Special protective equipment for fire-fighters</b>	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.
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<b>Hazchem code</b>	2X
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**6. ACCIDENTAL RELEASE MEASURES****Personal precautions, protective equipment and emergency procedures**

<b>Personal precautions</b>	Do not breathe dust. Avoid contact with skin, eyes, and clothing. Ensure adequate ventilation. Evacuate personnel to safe areas. Do not touch or walk through spilled material. Use personal protective equipment as required. Wash thoroughly after handling.
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<b>For emergency responders</b>	Use personal protection recommended in Section 8.
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**Environmental precautions**

<b>Environmental precautions</b>	Prevent entry into waterways, sewers, basements or confined areas.
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**Methods and material for containment and cleaning up**

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<b>Methods for containment</b>	Prevent further leakage or spillage if safe to do so.
<b>Methods for cleaning up</b>	Use appropriate personal protective equipment (PPE). Carefully shovel or sweep up spilled material and place in suitable container. Avoid generating dust.

## 7. HANDLING AND STORAGE

### Precautions for safe handling

<b>Advice on safe handling</b>	Do not breathe dust. Avoid contact with skin and eyes. Do not eat, drink or smoke when using this product. Take precautionary measures against static discharges. Use personal protection equipment. Wash thoroughly after handling.
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### Conditions for safe storage, including any incompatibilities

<b>Storage Conditions</b>	Keep containers tightly closed in a dry, cool and well-ventilated place. Keep container closed when not in use.
<b>Incompatible materials</b>	Strong alkalis. Metals.
<b>Poisons Schedule (SUSMP)</b>	None allocated

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control parameters

<b>Exposure Limits</b>	No value assigned for this specific material by Safe Work Australia. However, Workplace Exposure Standard(s) for particulates:
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Dusts not otherwise classified: 8hr TWA = 10 mg/m<sup>3</sup>

As published by Safe Work Australia Workplace Exposure Standards for Airborne Contaminants.

TWA - The time-weighted average airborne concentration of a particular substance when calculated over an eight-hour working day, for a five-day working week.

These Workplace Exposure Standards are guides to be used in the control of occupational health hazards. All atmospheric contamination should be kept to as low a level as is workable. These workplace exposure standards should not be used as fine dividing lines between safe and dangerous concentrations of chemicals. They are not a measure of relative toxicity.

### Appropriate engineering controls

<b>Engineering controls</b>	Ensure that eyewash stations and safety showers are close to the workstation location. Apply technical measures to comply with the occupational exposure limits.  If in the handling and application of this material, safe exposure levels could be exceeded, the use of engineering controls such as local exhaust ventilation must be considered and the results documented. If achieving safe exposure levels does not require engineering controls, then a detailed and documented risk assessment using the relevant Personal Protective Equipment (PPE) (refer to PPE section below) as a basis must be carried out to determine the minimum PPE requirements.
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### Individual protection measures, such as personal protective equipment

The selection of PPE is dependent on a detailed risk assessment. The risk assessment should consider the work situation, the physical form of the chemical, the handling methods, and environmental factors.

OVERALLS, SAFETY SHOES, CHEMICAL GOGGLES, GLOVES, DUST MASK.



<b>Eye/face protection</b>	Tight sealing safety goggles.
<b>Skin and body protection</b>	Wear suitable protective clothing. Overalls. Boots.
<b>Hand protection</b>	Elbow-length impervious gloves.
<b>Respiratory protection</b>	If determined by a risk assessment an inhalation risk exists, wear a dust mask/respirator meeting the requirements of AS/NZS 1715 and AS/NZS 1716.
<b>Environmental exposure controls</b>	No information available.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

<b>Physical state</b>	Solid
<b>Appearance</b>	Crystals
<b>Color</b>	Light green
<b>Odor</b>	No information available
<b>Odor threshold</b>	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
<b>pH</b>	No data available	None known
<b>pH (as aqueous solution)</b>	No data available	None known
<b>Melting point / freezing point</b>	670°C	None known
<b>Boiling point / boiling range</b>	1026°C	None known
<b>Flash point</b>	Not applicable	None known
<b>Evaporation rate</b>	No data available	None known
<b>Flammability (solid, gas)</b>	No data available	None known
<b>Flammability Limit in Air</b>		None known
<b>Upper flammability or explosive limits</b>	No data available	
<b>Lower flammability or explosive limits</b>	No data available	
<b>Vapor pressure</b>	10 mmHg @693°C	None known
<b>Vapor density</b>	No data available	None known
<b>Relative density</b>	1.93	None known
<b>Water solubility</b>	Soluble in water	None known
<b>Solubility(ies)</b>	No data available	None known
<b>Partition coefficient</b>	No data available	None known
<b>Autoignition temperature</b>	No data available	None known
<b>Decomposition temperature</b>	No data available	None known
<b>Kinematic viscosity</b>	No data available	None known
<b>Dynamic viscosity</b>	No data available	None known

### Other information

## 10. STABILITY AND REACTIVITY

### Reactivity

**Reactivity** Hygroscopic: absorbs moisture or water from surrounding air.

### Chemical stability

**Stability** Stable under normal conditions.

### Explosion data

**Sensitivity to mechanical impact** None.

**Sensitivity to static discharge** None.

### Possibility of hazardous reactions

**Possibility of hazardous reactions** Can react vigorously with alkalis.

### Conditions to avoid

**Conditions to avoid** Moisture. Dust formation.

### Incompatible materials

**Incompatible materials** Strong alkalis. Metals.

### Hazardous decomposition products

**Hazardous decomposition products** Oxides of iron. Hydrogen chloride.

## 11. TOXICOLOGICAL INFORMATION

### Acute toxicity

### Information on likely routes of exposure

**Product Information** No adverse health effects expected if the chemical is handled in accordance with this Safety Data Sheet and the chemical label. Symptoms or effects that may arise if the chemical is mishandled and overexposure occurs are:

**Inhalation** May cause irritation.

**Eye contact** Causes serious eye damage.

**Skin contact** Contact causes severe skin irritation and possible burns.

**Ingestion** Can burn mouth, throat, and stomach. Harmful if swallowed.

**Symptoms** Irritation/Corrosion. May cause redness and tearing of the eyes. Erythema (skin redness). Burning.

### Numerical measures of toxicity - Product Information

No information available

See section 16 for terms and abbreviations

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

<b>Skin corrosion/irritation</b>	Causes burns.
<b>Serious eye damage/eye irritation</b>	Causes serious eye damage.
<b>Respiratory or skin sensitization</b>	No information available.
<b>Germ cell mutagenicity</b>	No information available.
<b>Carcinogenicity</b>	No information available.
<b>Reproductive toxicity</b>	No information available.
<b>STOT - single exposure</b>	No information available.
<b>STOT - repeated exposure</b>	No information available.
<b>Aspiration hazard</b>	No information available.

**12. ECOLOGICAL INFORMATION****Ecotoxicity**

**Ecotoxicity** Keep out of waterways.

**Persistence and degradability**

**Persistence and degradability** No information available.

**Bioaccumulative potential**

**Bioaccumulation** No information available.

**Mobility**

**Mobility in soil** No information available.

**Other adverse effects****13. DISPOSAL CONSIDERATIONS****Waste treatment methods**

**Waste from residues/unused products** Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

**Contaminated packaging** Empty containers should be taken to an approved waste handling site for recycling or disposal.

**14. TRANSPORT INFORMATION****ADG**

Classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for Transport by Road and Rail; DANGEROUS GOODS.

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<b>UN number</b>	3260
<b>Proper shipping name</b>	CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S. (FERROUS CHLORIDE TETRAHYDRATE)
<b>Hazard class</b>	8
<b>Packing group</b>	III
<b>Hazchem code</b>	2X

**IATA**

Classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air; DANGEROUS GOODS.

<b>UN number</b>	3260
<b>UN proper shipping name</b>	CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S. (FERROUS CHLORIDE TETRAHYDRATE)
<b>Transport hazard class(es)</b>	8
<b>Packing group</b>	III

**IMDG**

Classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea; DANGEROUS GOODS.

<b>UN number</b>	3260
<b>UN proper shipping name</b>	CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S. (FERROUS CHLORIDE TETRAHYDRATE)
<b>Transport hazard class(es)</b>	8
<b>Packing group</b>	III
<b>IMDG EMS Fire</b>	F-A
<b>IMDG EMS Spill</b>	S-B
<b>Marine pollutant</b>	No

**15. REGULATORY INFORMATION****Safety, health and environmental regulations/legislation specific for the substance or mixture****National regulations****Australia**

Classified as dangerous goods in accordance with the Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG).

Classified as a hazardous chemical in accordance with the criteria of Safe Work Australia - Globally Harmonized System (GHS).

See section 8 for national exposure control parameters

**Poisons Schedule (SUSMP)** None allocated

**International Inventories**

**AIC** This material is listed on the Australian Inventory of Industrial Chemicals.

**Legend:**

**AIC- Australian Inventory of Industrial Chemicals**

**International Regulations**



The Montreal Protocol on Substances that Deplete the Ozone Layer Not applicable

The Stockholm Convention on Persistent Organic Pollutants Not applicable

The Rotterdam Convention Not applicable

## 16. OTHER INFORMATION

Supplier Safety Data Sheet 08/ 2023

**Reason(s) For Issue:** Reissue of an obsolete SDS

**Issuing Date:** 15-Aug-2023

This Safety Data Sheet has been prepared by Ixom Operations Pty Ltd (Toxicology and SDS Services).

**Revision Note:**

The symbol (\*) in the margin of this SDS indicates that this line has been revised.

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

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation
C	Carcinogen		

**Key literature references and sources for data used to compile the SDS**

EPA (Environmental Protection Agency)  
 Acute Exposure Guideline Level(s) (AEGL(s))  
 U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act  
 U.S. Environmental Protection Agency High Production Volume Chemicals  
 Food Research Journal  
 Hazardous Substance Database  
 International Uniform Chemical Information Database (IUCLID)  
 Japan GHS Classification  
 Australian Industrial Chemicals Introduction Scheme (AICIS)  
 NIOSH (National Institute for Occupational Safety and Health)  
 National Library of Medicine's ChemID Plus (NLM CIP)  
 National Library of Medicine's PubMed database (NLM PUBMED)  
 National Toxicology Program (NTP)  
 New Zealand's Chemical Classification and Information Database (CCID)  
 Organization for Economic Co-operation and Development Environment, Health, and Safety Publications  
 Organization for Economic Co-operation and Development High Production Volume Chemicals Program  
 Organization for Economic Co-operation and Development Screening Information Data Set  
 RTECS (Registry of Toxic Effects of Chemical Substances)  
 World Health Organization

**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text This SDS summarises to our best knowledge at the date of issue, the chemical health and safety hazards of the material and general guidance on how to safely handle the material in the workplace. Since Ixom Operations Pty Ltd cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, assess and control the risks arising from its use of the material.

If clarification or further information is needed, the user should contact their Ixom representative or Ixom Operations Pty

Ltd at the contact details on page 1.

Ixom Operations Pty Ltd's responsibility for the material as sold is subject to the terms and conditions of sale, a copy of which is available upon request.

**End of Safety Data Sheet**