



Infosafe No™ 1CH3C

Issue Date : October 2020

RE-ISSUED by CHEMSUPP

Product Name **FERRIC CHLORIDE Hexahydrate**

Classified as hazardous

1. Identification

GHS Product Identifier FERRIC CHLORIDE Hexahydrate

Company Name CHEM-SUPPLY PTY LTD (ABN 19 008 264 211)

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Recommended use of the chemical and restrictions on use Laboratory reagent, electroplating, stain for electron microscope, manufacture of other iron salts and chlorination of copper and silver ores.

Other Names

<u>Name</u>	<u>Product Code</u>
IRON (III) CHLORIDE Hexahydrate LR	FL023
Ferric trichloride hexahydrate, Iron trichloride hexahydrate	

Additional Information When used for laboratory chemical analysis, it has no poison schedule. If this compound is used in human or animal application then it may acquire a poison schedule of S6, S5, S4 or S2.

Other Information

Chem-Supply Pty Ltd does not warrant that this product is suitable for any use or purpose. The user must ascertain the suitability of the product before use or application intended purpose. Preliminary testing of the product before use or application is recommended. Any reliance or purported reliance upon Chem-Supply Pty Ltd with respect to any skill or judgement or advice in relation to the suitability of this product of any purpose is disclaimed. Except to the extent prohibited at law, any condition implied by any statute as to the merchantable quality of this product or fitness for any purpose is hereby excluded. This product is not sold by description. Where the provisions of Part V, Division 2 of the Trade Practices Act apply, the liability of Chem-Supply Pty Ltd is limited to the replacement of supply of equivalent goods or payment of the cost of replacing the goods or acquiring equivalent goods.

2. Hazard Identification

GHS classification of the substance/mixture Corrosive to Metals: Category 1
Eye Damage/Irritation: Category 1
Acute Toxicity - Oral: Category 4
Skin Corrosion/Irritation: Category 2

Signal Word (s) DANGER

Hazard Statement (s) H290 May be corrosive to metals.
H302 Harmful if swallowed.
H315 Causes skin irritation.
H318 Causes serious eye damage.

Pictogram (s) Corrosion, Exclamation mark

**Precautionary statement – Prevention**

P234 Keep only in original container.
P264 Wash thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P280 Wear protective gloves/protective clothing/eye protection/face protection.



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Precautionary statement – Response P301+P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P330 Rinse mouth.
P302+P352 IF ON SKIN: Wash with plenty of soap and water.
P332+P313 If skin irritation occurs: Get medical advice/attention.
P362 Take off contaminated clothing and wash before reuse.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER or doctor/physician.
P390 Absorb spillage to prevent material damage.

Precautionary statement – Storage P406 Store in corrosive resistant/ container with a resistant inner liner.

3. Composition/information on ingredients

Ingredients	Name	CAS	Proportion
	Iron (III) chloride hexahydrate	10025-77-1	100 %

4. First-aid measures

Inhalation If inhaled, remove from contaminated area to fresh air immediately. Apply artificial respiration if not breathing. If breathing is difficult, give oxygen. Get medical aid if cough or other symptoms appear.

Ingestion Rinse mouth thoroughly with water immediately, repeat until all traces of product have been removed. Give water to drink. DO NOT INDUCE VOMITING. Seek medical advice if symptoms persist.

Skin Wash affected areas with copious quantities of water. Remove contaminated clothing and wash before re-use. Seek medical advice if effects persist.

Eye contact Immediately irrigate with copious quantity of water for at least 15 minutes. Eyelids to be held open. Seek immediate medical assistance.

First Aid Facilities Maintain eyewash fountain and safety shower in work area.

Advice to Doctor Treat symptomatically based on judgement of doctor and individual reactions of the patient.

Other Information For advice, contact a Poisons Information Centre (Phone eg Australia 13 1126; New Zealand 0800 764 766) or a doctor at once.

5. Fire-fighting measures

Hazards from Combustion Products May liberate toxic fumes in fire including hydrogen chloride and other toxic chlorine compounds.

Specific Methods Use extinguishing media most appropriate for the surrounding fire. No limitations to the type of extinguishing media.
Material does not burn.
Small fire: Use dry chemical, CO₂, water spray or foam.
Large fire: Use water spray, fog or foam.

Hazchem Code 2X

Precautions in connection with Fire Wear SCBA and structural firefighter's uniform.

6. Accidental release measures

Personal Precautions Avoid substance contact. Avoid generation of dusts: do not inhale dusts. Ensure supply of fresh air in enclosed rooms.

Personal Protection Wear protective clothing specified for normal operations (see Section 8)

Clean-up Methods - Small Spillages Sweep up (avoid generating dust) and remove to a suitable, clearly labelled container for disposal in accordance with local regulations.

Clean-up Methods - Large Spillages Seek expert advice on handling and disposal.

Environmental Precautions Prevent from entering into drains, ditches, rivers or the sea.



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7. Handling and storage

Precautions for Safe Handling Avoid generation or accumulation of dusts. Wash hands and face thoroughly after working with material. Do not use metal equipment or containers.

Conditions for safe storage, including any incompatibilities Keep containers closed at all times. Keep container dry Store at room temperature (15 - 25 °C).

Storage Regulations Refer Australian Standard AS 3780-1994 'The storage and handling of corrosive substances'.

8. Exposure controls/personal protection

Occupational exposure limit values	Name	STEL		TWA		Footnote
		mg/m3	ppm	mg/m3	ppm	
	Iron (III) chloride hexahydrate			1		
Other Exposure Information	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. A time weighted average (TWA) has been established for Iron salts, soluble (as Fe) (Safe Work Australia) of 1 mg/m³. The exposure value at the TWA is the average airborne concentration of a particular substance when calculated over a normal 8 hour working day for a 5 day working week.					
Appropriate engineering controls	Maintain the concentrations values below the TWA. This may be achieved by process modification, use of local exhaust ventilation, capturing substances at the source, or other methods.					
Respiratory Protection	Where ventilation is not adequate, respiratory protection may be required. Avoid breathing dust, vapours or mists. Respiratory protection should comply with AS 1716 - Respiratory Protective Devices and be selected in accordance with AS 1715 - Selection, Use and Maintenance of Respiratory Protective Devices. Filter capacity and respirator type depends on exposure levels. In event of emergency or planned entry into unknown concentrations a positive pressure, full-facepiece SCBA should be used. If respiratory protection is required, institute a complete respiratory protection program including selection, fit testing, training, maintenance and inspection.					
Eye Protection	The use of a face shield, chemical goggles or safety glasses with side shield protection as appropriate. Must comply with Australian Standards AS 1337 and be selected and used in accordance with AS 1336.					
Hand Protection	Wear gloves of impervious material conforming to AS/NZS 2161: Occupational protective gloves - Selection, use and maintenance. Final choice of appropriate glove type will vary according to individual circumstances. This can include methods of handling, and engineering controls as determined by appropriate risk assessments. Avoid skin contact when removing gloves from hands, do not touch the gloves outer surface. Dispose of gloves as hazardous waste.					
Personal Protective Equipment	Personal protective equipment should not solely be relied upon to control risk and should only be used when all other reasonably practicable control measures do not eliminate or sufficiently minimise risk. Guidance in selecting personal protective equipment can be obtained from Australian, Australian/New Zealand or other approved standards.					
Footwear	Safety boots in industrial situations is advisory, foot protection should comply with AS 2210, Occupational protective footwear - Guide to selection, care and use.					
Body Protection	Clean impervious clothing should be worn, preferably with an apron for extra protection. Clothing for protection against chemicals should comply with AS 3765 Clothing for Protection Against Hazardous Chemicals.					
Hygiene Measures	Always wash hands before smoking, eating or using the toilet. Wash contaminated clothing and other protective equipment before storing or re-using.					



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9. Physical and chemical properties

Form	Solid
Appearance	Brownish-yellow or orange crystals or powder.
Odour	Usually slight odour of hydrogen chloride.
Melting Point	~37 °C
Boiling Point	280 - 285 °C (760 mm Hg)
Solubility in Water	Soluble in water
Solubility in Organic Solvents	Readily soluble in alcohol, acetone and ether.
Specific Gravity	1.82
pH	~1.8 (10 g/l, H ₂ O, 25 °C)
Vapour Pressure	1 mm Hg (194 °C)
Partition Coefficient: n-octanol/water	Log P(o/w): -4 (24 °C) (anhydrous substance)
Flammability	Non combustible material.
Molecular Weight	270.30

10. Stability and reactivity

Chemical Stability	Stable under normal use conditons. Hygroscopic
Conditions to Avoid	Strong heating, moisture.
Incompatible Materials	Ethylene oxide, alkali metals, sodium/sodium oxides, potassium, and oxidising agents. forms shock-sensitive mixtures with certain other materials.
Hazardous Decomposition Products	Hydrochloric acid gas and iron oxides.
Possibility of hazardous reactions	Ethylene oxide polymerises explosively in the presence of ferric chloride. Reacts with water to produce toxic and corrosive fumes.
Hazardous Polymerization	Will not occur.

11. Toxicological Information

Ingestion	Ingestion of material is corrosive causing severe burns to the mouth, throat and stomach. Symptoms include sore throat, diarrhoea, nausea, vomiting, gastrointestinal discomfort. Pink urine discoloration is a strong indicator of iron poisoning. Liver damage, coma, and death may follow, sometimes delayed as long as three days. Symptoms of the ingestion of large amounts may be delayed for several hours and can include epigastric pain, haematemesis, drop in blood pressure and possible circulatory failure. Hours or days after apparent recovery metabolic acidosis, convulsions and coma may occur. If the patient survives, symptoms of acute liver necrosis may develop and could lead to death due to hepatic coma.
Inhalation	Inhalation of material is extremely destructive to the mucous membranes and upper respiratory tract. Symptoms may include burning sensation, irritation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea, and vomiting.
Skin	Corrosive. Skin contact causes irritation, redness, pain and severe burns. May be harmful if absorbed through the skin.
Eye	Corrosive. Contact can cause blurred vision, redness, pain and severe tissues burns. Risk of serious damage to eyes.
Respiratory sensitisation	Not classified based on available information.
Skin Sensitisation	Not classified based on available information.



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Germ cell mutagenicity	Not classified based on available information.
Carcinogenicity	Not classified based on available information.
Reproductive Toxicity	Not classified based on available information.
STOT-single exposure	Not classified based on available information.
STOT-repeated exposure	Not classified based on available information.
Health Hazard	Cardiovascular disorders result after absorption of large quantities.
Chronic Effects	Repeated ingestion may cause liver and kidney damage. Prolonged exposure of the eyes may cause discoloration.
Mutagenicity	Not classified based on available information.

12. Ecological information

Persistence and degradability	Methods for the determination of biodegradability are not applicable to inorganic substances.
Bioaccumulative Potential	Behaviour in environmental compartments: Distribution: log P(o/w): -4 (24 °C) (anhydrous substance). No bioaccumulation is to be expected (log P(o/w)<1).
Biological Properties	Product reacts with water. The following may develop after reaction of the product with water: hydrochloric acid.
Environmental Protection	Do not allow to enter waters, waste water, or soil!

13. Disposal considerations

Disposal Considerations	Whatever cannot be saved for recovery or recycling should be disposed of according to relevant local, state and federal government regulations.
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14. Transport information

Transport Information	Dangerous Goods of Class 8 Corrosives are incompatible in a placard load with any of the following: - Class 1, Class 4.3, Class 5, Class 6, if the Class 6 dangerous goods are cyanides and the Class 8 dangerous goods are alkalis and Class 7.
U.N. Number	3260
UN proper shipping name	CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S. - (Iron (III) chloride hexahydrate)
Transport hazard class(es)	8
Hazchem Code	2X
Packing Group	III
IERG Number	37

15. Regulatory information

Regulatory Information	All of the significant ingredients in this formulation are compliant with Australian Industrial Chemicals Introduction Scheme (AICIS) regulations. Not listed under WHS Regulation 2011, Schedule 10 - Prohibited carcinogens, restricted carcinogens and restricted hazardous chemicals.
Poisons Schedule	Not Scheduled

16. Other Information

Literature References	'Standard for the Uniform Scheduling of Medicines and Poisons .', Commonwealth of Australia. National Road Transport Commission, 'Australian Code for the Transport of Dangerous Goods by Road and Rail 7th. Ed.' Safe Work Australia, 'National Code of Practice for the Preparation of Safety
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Safety Data Sheet

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Data Sheets for Hazardous Chemicals'.
Standards Australia, 'SAA/SNZ HB 76:2010 Dangerous Goods - Initial Emergency Response Guide', Standards Australia/Standards New Zealand.
Safe Work Australia, 'Hazardous Chemical Information System'.
Safe Work Australia, 'National Code of Practice for the Labelling of Safe Work Hazardous Substances'.
Safe Work Australia, 'National Exposure Standards for Atmospheric Contaminants in the Occupational Environment'.

Contact Person/Point

Paul McCarthy Ph. (08) 8440 2000 **DISCLAIMER STATEMENT:**
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Empirical Formula & Structural Formula

FeCl₃.6H₂O

...End Of MSDS...

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