Infosafe No™	1CH3B	Issue Date : September 2020	RE-ISSUED by CHEMSUPP

Product Name : **FERRIC CHLORIDE Anhydrous**

Classified as hazardous

1. Identification

GHS Product Identifier: FERRIC CHLORIDE Anhydrous

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

Address: 38 - 50 Bedford Street GILLMAN
SA 5013 Australia

Telephone/Fax Number: Tel: (08) 8440-2000

Emergency phone number: CHEMCALL 1800 127 406 (Australia) / +64-4-917-9888 (International)

Recommended use of the chemical and restrictions on use: Treatment of sewage and industrial wastes; etching agent for engraving, photography and printed circuitry; condensation catalyst in Friedel-Crafts reactions; mordant; oxidising agent, chlorinating agent, condensing agent; disinfectant; pigment; feed additive; water purification and laboratory reagent.

Other Names

Name	Product Code
IRON(III) CHLORIDE Anhydrous LR	FL022
Iron (III) chloride anhydrous, Iron trichloride	

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: Acute Toxicity - Oral: Category 4
Skin Corrosion/Irritation: Category 1B

Signal Word (s): DANGER

Hazard Statement (s): H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.

Pictogram (s): Corrosion, Exclamation mark

Precautionary statement – Prevention:
P260 Do not breathe dust/fume/gas/mist/vapours/spray.
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.

Precautionary statement – Response:
P301+P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P330 Rinse mouth.
P301+P330+P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P363 Wash contaminated clothing before reuse.
P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P310 Immediately call a POISON CENTER or doctor/physician.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

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Precautionary statement – Storage	P405 Store locked up.
Precautionary statement – Disposal	P501 Dispose of contents/container to an approved waste dispoal plant.

3. Composition/information on ingredients

Chemical Characterization Solid

Ingredients

Name	CAS	Proportion	Hazard Symbol	Risk Phrase
Iron (III) Chloride Anhydrous	7705-08-0	100 %		

4. First-aid measures

Inhalation	If inhaled, remove from contaminated area to fresh air immediately. If breathing is difficult, give oxygen. Apply artificial respiration with a respiratory medical device if not breathing. Do not use mouth to mouth resuscitation. Immediately medical attention is required.
Ingestion	Rinse mouth thoroughly with water immediately, repeat until all traces of product have been removed. DO NOT INDUCE VOMITING. Seek medical advice if effects persist.
Skin	Wash affected areas with copious quantities of water immediately. 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. Obtain medical attention immediately.
First Aid Facilities	Eye wash fountains and safety showers should be available for emergency use.
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	Liberates toxic and corrosive fumes of hydrogen chloride gas, hydrochloric acid and iron oxides. Product is itself does not burn.
Specific Methods	When material is not involved in fire: Do not use water on material itself. Use extinguishing media most appropriate for the surrounding fire. Small fire: Use CO_2, dry chemical, dry sand or flooding quantities of water. Large fire: Flood fire with large quantities of water while knocking down vapours with water fog.
Hazchem Code	2X
Decomposition Temp.	>300 °C
Precautions in connection with Fire	Wear SCBA and acid-resistant chemical splash suit.

6. Accidental release measures

Spills & Disposal	Do not touch or walk through spilled material. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Stop leak if safe to do so - Prevent entry into waterways, drains or confined areas. Small Spill: Cover with DRY earth, sand or other non-combustible material followed by a plastic sheet to minimize spreading or contact with rain. Use clean non-sparking tools to collect material and place it into loosely-covered plastic containers for later disposal.
Personal Precautions	Evacuate the area of all non-essential personnel. 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)

7. Handling and storage

Precautions for Safe Handling	Do not eat, drink or smoke when using this product. Eye wash facilities and emergency shower must be available when handling this product. Good personal hygiene procedures should be implemented. Take off contaminated clothing and wash it before reuse. Wash promptly with soap and water if skin becomes contaminated.

Conditions for safe storage, including any incompatabilities	Store away from oxidizing agents. Keep containers closed at all times. Keep container dry Store at room temperature (15 - 25 °C).
Corrosiveness	Highly corrosive to most metals in the presence of moisture.
Storage Regulations	Refer Australian Standard AS 378 'The storage and handling of corrosive substances'.

8. Exposure controls/personal protection

Occupational exposure limit values

Name	STEL		TWA		
	mg/m3	ppm	mg/m3	ppm	Footnote
Iron (III) Chloride Anhydrous			1		Iron salts, soluble (as Fe)

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 clothing or protective clothing should be worn, preferably with an apron. Clothing for protection against chemicals should comply with AS 3765 Clothing for Protection Against Hazardous Chemicals. Recommendation: Rubber or plastic gloves.
Hygiene Measures	Always wash hands before smoking, eating or using the toilet. Wash contaminated clothing and other protective equipment before storing or re-using.

9. Physical and chemical properties

Form	Solid
Appearance	Black-brown powder.
Odour	Slightly pungent.
Decomposition Temperature	>300 °C
Melting Point	306 °C (partly decomposes)
Boiling Point	319 °C

Solubility in Water	Very soluble (920 g/L @ 20 °C).
Solubility in Organic Solvents	Soluble in alcohol, glycerol, methanol, acetone and ether. Slightly soluble in carbon disulfide. Practically insoluble in ethyl acetate.
Specific Gravity	2.9 @ 25 °C
pH	1 (200 g/l, H2O, 20 °C)
Vapour Pressure	1 hPa (20 °C)
Vapour Density (Air=1)	5.61 g/l
Partition Coefficient: n-octanol/water	log P(o/w): -4 (24 °C)
Flammability	Non combustible material.
Molecular Weight	162.21
Other Information	Sublimation point: >120 °C

10. Stability and reactivity

Chemical Stability	Stable. Very hygroscopic. Readily absorbs water in air to form the hexahydrate.
Incompatible Materials	Oxidizing agents, epichlorohydrin, alkali metals (risk of explosion!), copper, light metals, and water.
Hazardous Decomposition Products	Liberates toxic and corrosive fumes of Hydrogen chloride gas, hydrochloric acid and iron oxides.
Possibility of hazardous reactions	Reacts with water to form toxic and corrosive hydrogen chloride gas. Risk of explosion when in contact with alkali metals.
Hazardous Polymerization	Will not occur.

11. Toxicological Information

Acute Toxicity - Oral	LD50 (rat):450 mg/kg.
Ingestion	Harmful if swallowed. May cause severe irritation of the mouth and throat, nausea and vomiting. After swallowing: irritations of mucous membranes in the mouth, pharynx, oesophagus and gastrointestinal tract.
Inhalation	Inhalation of dust may result in respiratory irritation, coughing and dyspnoea.
Skin	Severely irritating to skin. Prolonged contact may cause burns.
Eye	Causes burns and irritation. Risk of serious damage to eyes.
Respiratory sensitisation	Not classified based on available information.
Skin Sensitisation	Not classified based on available information.
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	Inhalation may result in spasm, inflammation, and edema of the larynx and bronchi, chemical pneumonitis, and pulmonary edema. Symptoms of exposure may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea, and vomiting. Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin. Overdose of iron compounds may have a corrosive effect on the gastrointestinal mucosa and be followed by necrosis, perforation, and stricture formation. Several hours may elapse before symptoms that can include epigastric pain, diarrhoea, vomiting, nausea, and hematemesis occur. After apparent recovery, a person may experience metabolic acidosis, convulsions, and coma hours or days later. Further complications may develop leading to acute liver necrosis that can result in death due to hepatic coma.

	The following applies to soluble iron compounds: nausea and vomiting after swallowing. The absorption of large quantities is followed by cardiovascular disorders. Toxic effect on liver and kidneys.
Mutagenicity	No evidence of mutagenic properties.

12. Ecological information

Persistence and degradability	Methods for the determination of biodegradability are not applicable to inorganic substances.
Bioaccumulative Potential	Behaviour in environmental compartments: log P(o/w): -4 (24 °C). No bioaccumulation is to be expected (log P(o/w)<1).
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 handled as hazardous waste and disposed of according to relevant local, state and federal government regulations.

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; and are incompatible with food and food packaging in any quantity.
U.N. Number	1773
UN proper shipping name	FERRIC CHLORIDE, ANHYDROUS
Transport hazard class(es)	8
Hazchem Code	2X
Packaging Method	3.8.8
Packing Group	III
EPG Number	8A1
IERG Number	40

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 fot the Preparation of Safety 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: All information provided in this data sheet or by our technical representatives is compiled from the best knowledge available to us. However, since data, safety standards and government regulations are subject to change and the conditions of handling and use, or misuse, are beyond our control, we make no warranty either expressed or implied, with respect to the completeness or accuracy to the information contained herein. Chem-Supply accepts no responsibility whatsoever for its accuracy or for any results that may be obtained by customers from using the data and disclaims all liability for reliance on information provided in this data sheet or by our technical representatives.

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Empirical Formula & Structural Formula $FeCl_3$

...End Of MSDS...