Infosafe No™ 1CH5D Issue Date :November 2020 RE-ISSUED by CHEMSUPP

Product Name **POTASSIUM FERROCYANIDE Trihydrate**

Not classified as hazardous

1. Identification

GHS Product Identifier POTASSIUM FERROCYANIDE Trihydrate

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Recommended use of the chemical and restrictions on use Tempering steel, dyeing, explosives, process engraving and lithography, in food industry, analytical chemistry and laboratory reagent.

Other Names

Name	Product Code
POTASSIUM FERROCYANIDE Trihydrate LR	PL039
POTASSIUM FERROCYANIDE Trihydrate AR	PA039
Potassium iron (II) cyanide, Potassium hexacyanoferrate(II) trihydrate	

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 Not classified as hazardous according to the Approved Criteria for Classifying Hazardous Substances [NOHSC:1008(2004)] 3rd Edition, Safe Work Australia.
Not classified as dangerous goods according to the Australian Dangerous Goods Code (ADG).

3. Composition/information on ingredients

Ingredients

Name	CAS	Proportion
Potassium Ferrocyanide Trihydrate	14459-95-1	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 area thoroughly with soap and water. Remove contaminated clothing and wash before reuse or discard. If symptoms develop seek medical attention.

Eye contact Immediately irrigate with copious quantity of water for at least 15 minutes. Eyelids to be held open. Seek medical advice if effects persist.

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. Consider the effects of potassium salts upon the heart.
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	Highly toxic fumes of cyanides, hydrogen cyanide, nitrogen oxides, carbon monoxide and carbon dioxide.
Specific Methods	Use extinguishing media most appropriate for the surrounding fire. No limitations to the type of extinguishing media. Small fire: Use dry chemical, CO2, water spray or foam. Large fire: Use water spray, fog or foam.
Specific hazards arising from the chemical	Material does not burn. Runoff may pollute waterways. Fire or heat may produce irritating, poisonous and/or corrosive fumes.
Precautions in connection with Fire	Wear SCBA and structural firefighter's uniform.

6. Accidental release measures

Personal Precautions	Avoid dust formation and avoid breathing dust. Avoid substance contact. Avoid generation of dusts: do not inhale dusts. Ensure supply of fresh air in enclosed rooms. Evacuate the area of all non-essential personnel.
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.

7. Handling and storage

Precautions for Safe Handling	Avoid substance contact and generation and inhalation of dust.
Conditions for safe storage, including any incompatibilities	Keep containers closed at all times. Store at room temperature (15 - 25 °C). Keep container tightly closed in a dry, well-ventilated place away from direct sunlight.

8. Exposure controls/personal protection

Other Exposure Information	No exposure standards have been established for this product by Safe Work Australia, however, the TWA exposure standard for dusts/mists not otherwise specified is 10 mg/m3. All atmospheric contamination should be kept to as low a level as is workable. 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. A time weighted average (TWA) has been established for Cyanides (as CN)(Safe Work Australia) of 5 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. Use in a fume cupboard if fumes of cyanides are to be released, such as upon mixing with hot concentrated acids or acid fumes, heating to decomposition, or strong irradiation with acid, basic or neutral solutions.
Respiratory Protection	Usually is not required. Where protection is required from nuisance levels of dust or mists select respiratory protection that complies with AS 1716 - Respiratory Protective Devices and select in accordance with AS 1715 - Selection, Use and Maintenance of Respiratory Protective Devices. Filter capacity and respirator type depends on exposure levels.
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.
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. 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.

9. Physical and chemical properties

Form	Solid
Appearance	Lemon yellow crystals or powder.
Odour	Odourless.
Melting Point	Becomes anhydrous @ 70 °C.
Boiling Point	Decomposes
Solubility in Water	211 g/L @ 20 °C
Specific Gravity	1.853 @ 17 °C
pH	8 - 10 (211 g/l, H2O, 25 °C)
Flammability	Non combustible material.
Molecular Weight	422.39
Other Information	Taste: Mild saline taste.

10. Stability and reactivity

Chemical Stability	Stable under normal use conditons.
Conditions to Avoid	Avoid temperatures above 60°C, sources of heat, direct sunlight.
Incompatible Materials	Acids, cupric nitrate, at high temperature with chromium trioxide and sodium nitrite, hydrochloric acids, nitrites, and oxidizing agents.
Possibility of hazardous reactions	Violent reaction with cupric nitrate. Mixtures with CrO3 or sodium nitrite explode on heating. Contact with acids liberates hydrogen cyanide (HCN). Contact with ammonia may be explosive.
Hazardous Polymerization	Will not occur.

11. Toxicological Information

Acute Toxicity - Oral	LD50 (rat): 3613 mg/kg (anhydrous substance), (IUCLID).
Ingestion	May cause irritation of the throat, general stomach upset and vomiting.
Inhalation	May cause irritation to respiratory tract. Symptoms may include coughing and shortness of breath.
Skin	May cause irritation, itching, scaling, reddening, or, occasionally, blistering.
Eye	May cause eye irritation.

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.
Chronic Effects	Due to the effect of potassium salts upon the heart, accidental ingestion of large amounts by persons suffering from a heart condition should be considered dangerous and immediate medical assistance sought.
Mutagenicity	Not classified based on available information.

12. Ecological information

Persistence and degradability	May persist based on information available.
Information on Ecological Effects	Harmful effect on aquatic organisms. Hazard for drinking water supplies. Will likely be mobile in the environment due to its water solubility.
Environmental Protection	Do not allow to enter waters, waste water, or soil!
Acute Toxicity - Fish	Poecilia reticulata LC50: 19 mg/l/96 h. (IUCLID)
Acute Toxicity - Daphnia	Daphnia magna EC50: 32 mg/l/96 h (anhydrous substance).(IUCLID)
Acute Toxicity - Algae	IC10 Desmodesmus subspicatus (green algae): 0.2mg/l; 4 d (IUCLID).
Acute Toxicity - Bacteria	Pseudomonas fluorescens EC10: >1000 mg/l/24 h (anhydrous substance).(IUCLID)
Other Information	May cause long-term adverse effects in the environment.

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.

14. Transport information

Transport Information	Not classified as a Dangerous Good according to the Australian Code for the Transport of Dangerous Goods by Road and Rail.

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:
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Empirical Formula & Structural Formula

$K_4Fe(CN)_6.3H_2O$

...End Of MSDS...