

Infosafe No™ 1CH3A Issue Date : September 2022 RE-ISSUED by CHEMSUPP

Product Name **IRON (II) SULFIDE**

Not classified as hazardous

Section 1 - Identification

Product Identifier	IRON (II) SULFIDE	
Company Name	CHEMSUPPLY AUSTRALIA 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)	
E-mail Address	www.chemsupply.com.au	
Recommended use of the chemical and restrictions on use	As laboratory source of hydrogen sulfide; ceramics; other sulfides; pigment, e.g., in paint, glass containers, hair dyes and ceramics; in anodes; in lubricant coatings; in treatment of exhaust gases and heavy metal pollution.	
Other Names	<u>Name</u>	<u>Product Code</u>
	Ferrous sulfide	
	IRON (II) SULFIDE TG	IT016
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	ChemSupply Australia 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 ChemSupply Australia 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 ChemSupply Australia 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.	

Section 2 - Hazard(s) Identification

GHS Classification of the Substance/Mixture	Classified as non-Hazardous according to the 7th Edition Globally Harmonised System of classification and labelling of Chemicals (GHS7) including Work, Health and Safety regulations, Australia. Not classified as dangerous goods according to the Australian Dangerous Goods Code (ADG).
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Section 3 - Composition and Information on Ingredients

Ingredients	<u>Name</u>	<u>CAS</u>	<u>Proportion</u>
	Iron (II) sulfide	1317-37-9	100 %

Section 4 - First Aid Measures

Inhalation	If inhaled, remove from contaminated area to fresh air immediately. 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. DO NOT INDUCE VOMITING. Seek medical advice if effects persist.
Skin	Wash affected area thoroughly with copious amounts of running water. Remove contaminated clothing and wash before reuse. Seek medical attention in severe cases.
Eye	If contact with the eye(s) occurs, wash with copious amounts of water for approximately 15 minutes holding eyelid(s) open. Take care not to rinse contaminated water into the non-affected eye. If rapid recovery does not occur, obtain medical attention.

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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.

Section 5 - Firefighting Measures

Suitable Extinguishing Media Use appropriate fire extinguisher for surrounding environment. Use water spray, dry chemical, carbon dioxide, or appropriate foam.

Hazards from Combustion Products Irritating and toxic fumes and gases, including sulfur oxides (SO₂, SO₃, SO_x), including sulfur oxide and sulfur dioxide, hydrogen sulfide gas and iron oxides.

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. Containers may explode when heated.

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

Other Information Powdered iron sulfide is pyrophoric.

Section 6 - Accidental Release Measures

Spills & Disposal Stop leak if safe to do so. Prevent entry into waterways, drains, confined areas. Prevent dust cloud. Use clean non-sparking tools to collect material and place it into loosely-covered plastic containers for later disposal.

Personal Precautions Avoid inhalation, contact with skin, eyes and clothing.

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

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

Section 7 - Handling and Storage

Precautions for Safe Handling Avoid ingestion and inhalation of dust. Avoid contact with eyes, skin, and clothing. Minimize generating dusty conditions. Keep container tightly closed. Provide ventilation. Use with adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment.

Conditions for safe storage, including any incompatibilities Store in tightly closed containers, in a cool, dry, well-ventilated area away from incompatible substances.

Storage Temperatures Store at room temperature (15 to 25 °C recommended).

Section 8 - Exposure Controls and Personal Protection

Other Exposure Information 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.

Engineering Controls In industrial situations 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.

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Eye and Face 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	Hand protection should comply with AS 2161, Occupational protective gloves - Selection, use and maintenance.
Personal Protective Equipment	Final choice of personal protective equipment will depend on individual circumstances and/or according to risk assessments undertaken.
Body Protection	Clean clothing or protective 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.

Section 9 - Physical and Chemical Properties

Form	Solid
Appearance	Dark-brown or greyish-black metallic sticks or rods.
Odour	Almost odourless to sulfurous odour.
Melting Point	1193 - 1195 °C.
Boiling Point	Decomposes.
Solubility in Water	Almost insoluble (0.00062 g/100 ml H ₂ O at 18 °C).
Solubility in Organic Solvents	Insoluble in nitric acid; soluble in acids with evolution of hydrogen sulfide gas.
Specific Gravity	4.84
Vapour Pressure	Negligible.
Flammability	Non combustible material.
Explosion Properties	The use of steel equipment in conjunction with hydrogen sulfide or volatile sulfide compounds will cause it to spontaneously explode in air. Exothermic reaction with lithium nitrates at 260 °C and rapidly rises to 960 °C.
Molecular Weight	87.91

Section 10 - Stability and Reactivity

Chemical Stability	Stable at room temperature in closed containers under normal storage and handling conditions. Sensitive to moisture, sensitive to air. Oxidized by moist air to sulfur (S) and iron oxide (Fe ₃ O ₄).
Possibility of Hazardous Reactions	Moist material oxidises exothermically in air reaching ignition temperature. Exothermic reaction with lithium nitrates at 260 °C and rapidly rises to 960 °C. The use of steel equipment in conjunction with hydrogen sulfide or volatile sulfide compounds will cause it to spontaneously explode in air. Reacts vigorously with hydrogen peroxide. Exposure to acids may result in emission of toxic hydrogen sulfide gas.
Conditions to Avoid	Exposure to air and moisture, dust generation, acids, strong oxidants, and incompatible materials.
Incompatible Materials	Moisture, acids (forms hydrogen sulfide gas), oxidizing agents, halogens, hydrogen peroxide, strong bases, powdered metals and metal oxides.
Hazardous Decomposition Products	Irritating and toxic fumes and gases, sulfur oxides (SO _x), including sulfur oxide and sulfur dioxide, hydrogen sulfide gas, and iron oxides.
Hazardous Polymerization	Will not occur.

Section 11 - Toxicological Information

Ingestion	May be harmful if swallowed. Ingestion of this product may irritate the digestive tract, causing nausea and vomiting.
Inhalation	May be harmful if inhaled. May be irritating to mucous membranes of the nose,

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Skin throat and respiratory tract. The toxicological properties of this substance have not been fully investigated.
Eye May cause mild irritation on contact with skin. The toxicological properties of this material have not been fully investigated.
Carcinogenicity May cause mild mechanical eye irritation and redness. The toxicological properties of this material have not been fully investigated.
Not listed in the IARC Monographs.

Section 12 - Ecological Information

Ecological Information No ecology data available for this product.
Environmental Protection Do not allow to enter waters, waste water, or soil!

Section 13 - Disposal Considerations

Disposal Considerations Dispose of according to relevant local, state and federal government regulations.

Section 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.
Environmental Hazards Very toxic to aquatic organisms. Dangerous for the environment. Contact with acids liberates toxic gas. The following applies to soluble sulfides in general: toxic for aquatic organisms. H₂S may form even in a dilute acidic environment. The following applies to H₂S: toxic to fish from 0.5 mg/l up; sulfide has a harmful effect on plankton and fish; hazard for drinking water!

Section 15 - Regulatory Information

Regulatory Information Listed in the Australian Inventory of Chemical Substances (AICS).
Poisons Schedule Not Scheduled

Section 16 - Any Other Relevant 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 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

FeS

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