1. Identification

**GHS Product Identifier**: IRON (II) SULFIDE

**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
Fax: (08) 8440-2001

**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**
- Ferrous sulfide
- IRON (II) SULFIDE TG

**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.

**EMERGENCY CONTACT NUMBER**: +61 08 8440 2000
Business hours: 8:30am to 5:00pm, Monday to Friday.

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**
Classified as non-Hazardous according to the Globally Harmonised System of classification and labelling of Chemicals (GHS) including Work, Health and Safety regulations, Australia.

**Not classified as dangerous goods according to the Australian Dangerous Goods Code (ADG).**

3. Composition/information on ingredients

**Chemical Characterization Ingredients**: Solid

<table>
<thead>
<tr>
<th>Name</th>
<th>CAS</th>
<th>Proportion</th>
<th>Hazard Symbol</th>
<th>Risk Phrase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iron (II) sulfide</td>
<td>1317-37-9</td>
<td>100 %</td>
<td></td>
<td></td>
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</tbody>
</table>

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 contact**: 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.

**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.

5. Fire-fighting measures

**Suitable extinguishing media**: Use appropriate fire extinguisher for surrounding environment. Use water spray, dry chemical, carbon dioxide, or appropriate foam.
Safety Data Sheet

Infosafe No™ 1CH3A  Issue Date: September 2017  RE-ISSUED by CHEMSUPP

Product Name: IRON (II) SULFIDE

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.

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.

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

8. Exposure controls/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.

Appropriate 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.

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
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.

9. Physical and chemical properties

Form
Solid

Appearance
Dark-brown or greyish-black metallic sticks or rods.
IRON (II) SULFIDE

Not classified as hazardous

Odour: Almost odourless to sulfurous odour.
Melting Point: 1193 - 1195 °C.
Boiling Point: Decomposes.
Solubility in Water: Almost insoluble (0.00062 g/100 ml H2O 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 initiates at 260 °C and rapidly rises to 960 °C.
Molecular Weight: 87.91

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 (Fe3O4).

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 (SOx), including sulfur oxide and sulfur dioxide, hydrogen sulfide gas, and iron oxides.

Possibility of hazardous reactions: Moist material oxidises exothermically in air reaching ignition temperature. Exothermic reaction with lithium initiates 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.

Hazardous Polymerization: Will not occur.

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, throat and respiratory tract. The toxicological properties of this substance have not been fully investigated.
Skin: May cause mild irritation on contact with skin. The toxicological properties of this material have not been fully investigated.
Eye: May cause mild mechanical eye irritation and redness. The toxicological properties of this material have not been fully investigated.

Carcinogenicity: Not listed in the IARC Monographs.

12. Ecological information

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

13. Disposal considerations

Disposal Considerations: Dispose 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
Safety Data Sheet

Chem-Supply

Infosafe No™ 1CH3A          Issue Date : September 2017          RE-ISSUED by CHEMSUPP

Product Name : IRON (II) SULFIDE

Not classified as hazardous

Listed in the Australian Inventory of Chemical Substances (AICS).

Not Scheduled

16. Other Information

Literature References

'Standard for the Uniform Scheduling of Medicines and Poisons No. 15', Commonwealth of Australia, November 2016.
Safe Work Australia, 'Approved Criteria for Classifying Hazardous Substances [NOHSC:1008 (2004)]'.
Safe Work Australia, 'Hazardous Substances Information System, 2005'.
Safe Work Australia, 'National Code of Practice for the Labelling of Safe Work Hazardous Substances (2011)'.

Contact Person/Point

Paul McCarthy Ph. (08) 8440 2000

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Empirical Formula & Structural Formula

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