1. Identification

GHS Product Identifier
CHEM-SUPPLY PTY LTD (ABN 19 008 264 211)

Company Name
38 - 50 Bedford Street GILLMAN
SA 5013  Australia

Address
Tel: (08) 8440-2000
Fax: (08) 8440-2001

Telephone/Fax Number

Recommended use of the chemical and restrictions on use
Powder metallurgy products, magnets, high-frequency cores, auto parts, catalyst in ammonia synthesis and medicine.

Name
IRON Powder
IRON FILINGS Fine
IRON Wire

Product Code
IT013
IT014
IT015

Other Information
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 disclaimer. Except to the extent prohibited at law, no 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 dangerous goods according to the Australian Dangerous Goods Code (ADG).

3. Composition/information on ingredients

Chemical Characterization
Solid

Ingredients

Name
Iron

CAS
7439-89-6

Proportion
100 %

Hazard Symbol

Risk Phrase

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 effects 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. 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

Hazard from Combustion Products
Oxides of iron.

Specific Methods
Material does not burn. This product in sufficient quantity and reduced particle size is capable of creating
**Precautions in connection with Fire**

The materials themselves are non-flammable but the fine metallic dust produced as a result of their breakdown or removed from metallic components during cleaning or surface treatments can present both fire and explosion hazards.

**Other Information**

6. Accidental release measures

- **Spills & Disposal**
  - ELIMINATE all ignition sources (no smoking, flares, sparks or flames) within at least 25m. 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.

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

- **Clean-up Methods**
  - When iron ions flocculate in an alkaline medium, mechanical damage occurs in aquatic organisms. Due to the poor solubility of the product, no harmful effects on aquatic organisms are to be expected when handled and used with due care and attention.

- **Environmental Precautions**
  - Corrosive in water.
IRON (Filings, Powder, Wire)

Not classified as hazardous

Hygiene Measures:
an apron. Clothing for protection against chemicals should comply with AS 3765 Clothing for Protection Against Hazardous Chemicals.
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: Grey-black filings, grey powder or black-brown wire.
Odour: Odourless.
Melting Point: 1300 - 1500 °C (depending upon composition)
Boiling Point: 2730 - 2750 °C
Solubility in Water: Insoluble, can react with water.
Specific Gravity: 7.86 @ 20 °C
Vapour Pressure: 1 mm Hg @ 1787 °C
Volatile Component: 0% @ 21 °C
Flammability: Non combustible material. Non flammable.
Auto-Ignition Temperature: 100 °C - 700 °C - powder
Explosion Properties: Moderate explosion hazard in the form of a dust when exposed to heat, flame or static discharge.
Molecular Weight: 55.85
Particle Size: +212 µm: 0%, +100 µm: 21%, +45 µm: 79%.
Other Information: Tensile strength: 30,000 psi
Brinell hardness: 60
Magnetic permeability 88,400 gauss @ 25 °C
Dissolves in nonoxidising acids (sulfuric and hydrochloric acid) and in cold dilute nitric acid.

10. Stability and reactivity

Chemical Stability: Stable to ignition temperature of 700°C (1291°F). Sensitive to moisture. Stable in dry air but readily oxidizes in moist air forming rust. Ultrafine (ca. 5 microns) powder forms are very unstable and can ignite spontaneously in air.

Conditions to Avoid: Heat, flame, ignition sources, dusting and incompatibles.

Incompatible Materials: Strong oxidizers, water (including humid atmospheres), acids, aldehydes, halogen-halogen compounds, hydrogen peroxide, hydrogen sulfide, nitrogen dioxide, nitril compounds, oils (heat). Solid or powdered iron ignites or explodes on contact with acetaldehyde, ammonium peroxodisulfate, chloroformamidinium, chloric acid, ammonium nitrate, halogens, dinitrogen tetraoxide, nitryl fluoride, polystyrene, sodium acetylide, potassium dichromate and peroxyformic acid. Hot iron wire burns in chlorine gas. Chlorine trifluoride reacts with iron with incandescence.

Hazardous Decomposition Products: Toxic iron oxide fumes.

Possibility of hazardous reactions: Can react with water to liberate flammable hydrogen gas.

Hazardous Polymerization: Will not occur.

11. Toxicological Information

Toxicology Information: No adverse health effects expected if the product is handled in accordance with this Safety Data Sheet and the product label. If mishandled or overexposed to this product the following symptoms or effects may occur.

Ingestion: After swallowing, symptoms may include nausea, vomiting and diarrhea. Extremely large oral dosages may produce gastrointestinal disturbances. An overdose of iron may cause vomiting, abdominal pain, bloody diarrhea, vomiting blood, lethargy, cardiac dysrhythmia, drop in blood pressure and shock. In severe cases, toxicity may progress and develop into an increase in acidity in the blood, bluish skin
Safety Data Sheet

Infosafe No™ 1CH38  Issue Date: February 2016  RE-ISSUED by CHEMSUPP

Product Name: IRON (Filings, Powder, Wire)

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Inhalation
- Discoloration, fever, liver damage and possibly death.
- Irritation symptoms in the respiratory tract. Symptoms may include coughing and shortness of breath.

Skin
- No adverse effects expected.

Eye
- May cause irritation, transient irritation, redness and pain. Eye contact may cause conjunctivitis and deposition of iron particles can leave a 'rust ring' or brownish stain on the cornea.

Carcinogenicity
- Has been found to cause cancer in laboratory animals.

Reproductive Toxicity
- Human [resp]: decline in semen parameters.

Chronic Effects
- Iron and steel founding is evaluated in the IARC Monographs (Exposure circumstances) (Vol. 34, Suppl. 7; 1987) as Group 1: Carcinogenic to humans.

Mutation
- No evidence of mutagenic effects.

12. Ecological information

Ecotoxicity
- Quantitative data on the ecological effect of this product are not available.

Persistence and degradability
- Methods for the determination of biodegradability are not applicable to inorganic substances.

Other Adverse Effects
- When iron ions flocculate in an alkaline medium, mechanical damage occurs in aquatic organisms.

Information on Ecological Effects
- Due to the poor solubility of the product, no harmful effects on aquatic organisms are to be expected when handled and used with due care and attention.

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

Poisons Schedule
- Not Scheduled

16. Other Information

Literature References
- 'Standard for the Uniform Scheduling of Medicines and Poisons No. 6', Commonwealth of Australia, February 2015.
- 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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