

MATERIAL SAFETY DATA SHEET

PRODUCT: IRON SULPHATE

Date of Issue: 16 AUG 2021 **Valid until:** 15 AUG 2026 **GHS Format**

1. IDENTIFICATION OF MATERIAL & SUPPLIER

Product (material) Name: IRON SULPHATE

Other names: Ferrous Sulphate monohydrate

Manufacturer's code: MTO0523B (500G)

Recommended use: as a micro nutrient fertiliser to supplement Iron deficiency in plants and also as acts as a mild soil acidifer.

Manufacturer/Supplier Information:

Name: MANUTEC PTY LTD

Address: 30 Jonal drive, Cavan, South Australia 5094

Telephone No:+61-8-8260 2277 **Fax:**+61-8-8260 2399

Email: manutec@manutec.com.au

Emergency contact only: Poisons Information Centre (Australia) 131126

2. HAZARDS IDENTIFICATION

Poisons Schedule: Not scheduled

Hazard Classification: Hazardous according to the criteria of the Globally Harmonised System of Classification and Labelling of Chemicals (GHS)

Hazard Categories:

Acute Toxicity (Oral) - Category 4

Skin Corrosion/Irritation - Category 2

Serious Eye Damage/Irritation - Category 2A

Pictograms:



Signal Word: Warning

Hazard Statements: H302 Harmful if swallowed.
H315 Causes skin irritation.
H319 Causes serious eye irritation.

Precautionary Statements:

Prevention	P264 Wash hands thoroughly after handling. P270 Do not eat, drink or smoke when using this product. P273 Avoid release to the environment. P280 Wear protective gloves/protective clothing/eye protection/face protection.
Response	P301 + P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. P330 Rinse mouth. P302 + P352 IF ON SKIN: Wash with plenty of soap and water. P332 + P313 If skin irritation occurs: Get medical advice/attention. P363 Wash contaminated clothing before reuse. P321 Specific treatment (see First Aid Measures on Safety Data Sheet). P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337 + P313 If eye irritation persists: Get medical advice/attention.
Disposal	P501 Dispose of contents/container in accordance with local / regional / national /international regulations.

National Transport Commission (Australia)

Dangerous Goods Classification

NOT Dangerous Goods according to the criteria of the Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Entity	CAS Number	Proportion
Ferrous Sulphate Monohydrate	17375-41-6	90.0 - 100.0 %

4. FIRST AID MEASURES

Description of necessary measures according to routes of exposure

Swallowed:	Rinse mouth with water. Give plenty of water to drink provided victim is conscious. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Seek medical attention.
Eye:	If in eyes, hold eyelids apart and flush the eye continuously with running water. Continue flushing until advised to stop by a Poisons Information Centre or a doctor, or for at least 15 minutes.

- Skin:** If skin or hair contact occurs, immediately remove any contaminated clothing and wash skin and hair thoroughly with running water. If swelling, redness, blistering or irritation occurs seek medical assistance.
- Inhaled:** Remove victim from area of exposure - avoid becoming a casualty. Seek medical advice if effects persist.
- Advice to Doctor:** Treat symptomatically based on judgement of doctor and individual reactions of patient.
- Medical Conditions Aggravated by Exposure:**

No information available on medical conditions aggravated by exposure to this product.

Warning: Harmful if swallowed or inhaled. Causes irritation to skin, eyes and respiratory tract. Affects the liver.

Chronic Exposure: Severe or chronic ferrous sulfate poisonings may damage blood vessels. Large chronic doses cause rickets in infants. Chronic exposure may cause liver effects. Prolonged exposure of the eyes may cause discolouration.

5. FIRE FIGHTING MEASURES

General Measures

Clear fire area of all non-emergency personnel. Stay upwind. Keep out of low areas. Eliminate ignition sources. Move fire exposed containers from fire area if it can be done without risk

Flammability Conditions

Product is a non-flammable solid.

Extinguishing Media

In case of fire, use appropriate extinguishing media most suitable for surrounding fire conditions.

Fire and Explosion Hazard Not combustible.

Hazardous Products of Combustion

Non-combustible solid. Avoid generating dust. Incompatible with oxidizing agents, alkalis, soluble carbonates, and sources of ignition. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Burning may produce sulfur oxides.

Special Fire Fighting Instructions

Do NOT allow fire fighting water to reach waterways, drains or sewers. Store fire fighting water for treatment.

Personal Protective Equipment

Fire fighters should wear a positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots and gloves).

Flash Point	No Data Available
Lower Explosion Limit	No Data Available
Upper Explosion Limit	No Data Available
Auto Ignition Temperature	No Data Available
Hazchem Code	No Data Available

6. ACCIDENTAL RELEASE MEASURES

General Response/Cleanup Procedure: Avoid accidents, clean up immediately. May be slippery when spilt. Eliminate all sources of ignition. Increase ventilation. Avoid generating dust. Stop leak if safe to do so. Isolate the danger area. Use clean, non-sparking tools and equipment.

Clean Up Procedures : Contain and sweep/shovel up spills with dust binding material or use an industrial vacuum cleaner. Transfer to a suitable, labelled chemical-waste container and dispose of promptly as hazardous waste. Place under an inert atmosphere.

7. HANDLING AND STORAGE

Safe Handling:

1. When using the product, DO NOT eat, drink or smoke
2. Avoid contact with skin & eyes and take off immediately all contaminated clothing
3. DO NOT empty the contents into drains
4. Wear suitable protective gloves, dust masks for protection if required.

Safe storage conditions:

Store in a cool, dry, well-ventilated area. Keep containers tightly closed when not in use. Inspect regularly for deficiencies such as damage or leaks. Protect against physical damage. Store away from incompatible materials as listed in section 10. Store protected from air. This product is not classified dangerous for transport according to The Australian Code for the Transport of Dangerous Goods By Road and Rail.

Container

Store in original packaging as approved by manufacturer.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure standards/limits: No data available

Biological limit values: No information is available

Engineering controls: A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area.

Personal Protection equipment:

RESPIRATOR: Wear an effective dust mask where dusts/vapours are generated and engineering controls are inadequate (AS1715/1716).

EYES: Safety glasses with side shields (AS1336/1337).

HANDS: Wear appropriate protective gloves (AS2161).

CLOTHING: When handling large volume of material and in factory production

conditions, recommended to wear Long-sleeved protective clothing and safety footwear (AS3765/2210).

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Solid
Odour	Odourless
Colour	Light Grey to Off-white or White
pH	3.0 - 5.0
Vapour Pressure	No Data Available
Relative Vapour Density	No Data Available
Boiling Point	>300oC
Freezing Point	57oC
Solubility	Soluble in water
Specific Gravity	No Data Available
Flash Point	No Data Available
Auto Ignition Temp	No Data Available
Evaporation Rate	No Data Available
Bulk Density	No Data Available
Corrosion Rate	No Data Available
Decomposition Temperature	>300oC
Density	No Data Available
Specific Heat	No Data Available
Molecular Weight	No Data Available
Net Propellant Weight	No Data Available
Melting Point	57
Appearance	Powder or Granular

10. STABILITY AND REACTIVITY

General Information	Hygroscopic: absorbs moisture or water from surrounding air.
Chemical Stability	Product is stable under normal conditions of use, storage and temperature. Loses water in dry air and oxidises upon exposure to moisture, forming a brown coating of extremely corrosive basic ferric sulfate.
Conditions to Avoid	Avoid dust generation. Avoid exposure to moisture. Avoid exposure to air.
Materials to Avoid	Incompatible with alkalis , oxidising agents , soluble carbonates, gold and silver salts, lead acetate, lime water, potassium, potassium iodide, sodium tartrate, sodium borate, tannin, vegetable astringent infusions and decoctions.
Hazardous Decomposition Products	During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Burning may produce sulfur oxides. Hazardous Polymerisation Hazardous polymerisation will not occur.

11. TOXICOLOGICAL INFORMATION

General Information	Oral LD50 (rat): 319 mg/kg (for ferrous sulphate) Warning: Harmful if swallowed or inhaled. Causes irritation to skin, eyes and respiratory tract. Affects the liver.
Chronic Exposure:	Severe or chronic ferrous sulfate poisonings may damage blood vessels. Large chronic doses cause rickets in infants. Chronic exposure may cause liver effects. Prolonged exposure of the eyes may cause discolouration.
EyeIrritant:	Causes eye irritation, redness and pain
Ingestion	Swallowing can result in nausea, vomiting, diarrhoea, and gastrointestinal irritation. Symptoms of swallowing large amounts of soluble iron compounds may be delayed several hours and can include epigastric pain, vomiting blood and circulatory failure.
Inhalation	Causes irritation to the respiratory tract. Symptoms may include coughing, shortness of breath.
Skin Irritant	Causes irritation to skin. Symptoms include redness, itching and pain.
Carcinogen Category	No Data Available

12. ECOLOGICAL INFORMATION

Ecotoxicity	No ecological information available for this product.
Persistence/Degradability	No information available on persistence/degradability for this product.
Mobility	No information available on mobility for this product. Soluble in water.
Environmental Fate	Avoid contaminating waterways, drains and sewers.
Bioaccumulation Potential	No information available on bioaccumulation for this product. very low bioaccumulative potential.
Environmental Impact	No Data Available
Bioaccumulative potential:	not applicable.

13. DISPOSABLE CONSIDERATIONS

Disposable methods:	Non hazardous waste, dispose in accordance with all local, state and federal regulations.
Packaging/containers:	Containers/packaging must be treated as waste and disosed in accordingly depending on material type. Plastic packaging can be treated as recycled waste as appropriate.

14. TRANSPORT INFORMATION

Land Transport (Australia) ADG

Proper Shipping Name	FERROUS SULPHATE MONOHYDRATE
Class	No Data Available
Subsidiary Risk(s)	No Data Available
UN Number	No Data Available
Hazchem No	Data Available
Pack Group	No Data Available
Special Provision	No Data Available

National Transport Commission (Australia)

Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

Dangerous Goods Classification

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15. REGULATORY INFORMATION

General Information	No Data Available
Poisons Schedule (Aust)	Not scheduled

National/Regional Inventories

Australia (AICS)	Listed
New Zealand (NZIoC)	Listed

16. OTHER INFORMATION

The MSDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

STATEMENT OF DISCLAIMER:

This Material Safety Data Sheet has been developed according to WHS Code of Practice Preparation of Safety Data Sheets for Hazardous Chemicals Guidelines and written in accordance with GHS format.

All information is as accurate and up-to-date as possible. Since Manutec Pty Ltd cannot anticipate or control the conditions under which this information may be used, each user should review the information in the specific context of the intended application. Manutec Pty Ltd will not be responsible for damages of any nature resulting from use of or reliance upon this information.

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