SAFETY DATA SHEET

Version 2.0
Issue Date: 29 April 2025

1. Substance and Supplier Identification

Product Name: Sulphate of Iron

Supplier: Morton Smith-Dawe Ltd
12 Kairua Road
Hornby
Christchurch, New Zealand
P.O Box 37-139 Halswell, Christchurch

Customer Centre: (03) 322 8117

Recommended Use: Fertiliser, control of moss on lawns

In Case of Emergency Contact:

National Poisons Centre: 0800 POISON (0800 764 766)

Transport Emergency: 111 – Tell operator what service is needed: Fire, Ambulance or Police.

2. Hazard Identification

New Zealand Hazardous Substances Classification:

This product is classified as hazardous according to criteria in the New Zealand Hazardous Substances (Hazard Classifications) Notice 2020.

Refer to Section 15 for HSNO Approval Number.

This product is not a Dangerous Goods for Transport. Refer to Section 14 for details.

Classification and Statements:

GHS Classification: Acute Toxicity, oral, Category 4
Skin Irritation, Category 2
Eye Irritation, Category 2
Hazardous to Terrestrial Vertebrates

HSNO Classification: 6.1D oral, acutely toxic
6.3A skin irritant
6.4A eye irritant
9.3C harmful to terrestrial vertebrates

Labelling Elements:

Hazard Statements:

H302 Harmful if swallowed.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
Hazardous to terrestrial vertebrates.

Signal Word: WARNING

GHS Pictograms:

PREVENTION STATEMENTS:

P102 - Keep out of reach of children.
P103 – Read carefully and follow all instructions.
P264 - Wash hands, exposed skin, 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 STATEMENTS:

P101 – If medical advice is needed, have product container or label at hand.
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 water.
P362 + P364 – Take off contaminated clothing and wash it before reuse.
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P332 + P337 + P313 - If skin irritation occurs or eye irritation persists: Get medical advice/attention.

STORAGE STATEMENTS: None

DISPOSAL:

P501 - In accordance with the EPA Hazardous Substances (Disposal) Notice 2017. Dispose of via an approved waste disposal contractor. Refer to Section 13 of the SDS.

Other Information: Iron compounds can be toxic to some pets if ingested. Cats and dogs in particular are not able to excrete excess iron and even exposure to low doses can build up in their systems to toxic levels.

3. Composition/ Information on Ingredients

Single substance:

Main Component	CAS Number	Concentration (% wt)
Ferrous Sulphate, Heptahydrate	7782-63-0	90 - 100 %

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

4. First Aid Measures

Workplace Facilities Required: Eye wash and safety shower facilities are required where bulk quantities are handled or stored.

If Inhaled: Remove to fresh air. Seek medical attention if symptoms persist.

In Contact with Eye: Hold eyes open, flush continuously with water for at least 15 minutes. Seek medical attention if irritation develops and persists.

In Contact with Skin: Wash skin with plenty of water, while removing contaminated clothing and shoes. Wash contaminated clothing before re-use. Seek medical attention if skin irritation develops and persists.

If Swallowed: DO NOT INDUCE VOMITING. Rinse mouth. Give small quantities of water. Never give anything by mouth to an unconscious person. Seek immediate medical attention. If vomiting occurs, keep head below hips to prevent aspiration to lungs.

Advice to Doctor: Treat symptomatically.

5. Fire Fighting Measures

Fire/Explosion Hazard: Product is not flammable or combustible. However, generation of fine dust may cause a dust explosion.

Suitable Extinguishing Media: Use extinguisher suitable for surrounding fire.

Precautions in Connection with Fire: May give off noxious fumes in a fire containing oxides of sulphur.

Advice for firefighters: Wear full firefighting gear and self-contained breathing apparatus.

6. Accidental Release Measures

Personal Precautions: Avoid contact with skin and eyes. Avoid generating dust. Avoid release to the environment. For large spills, emergency responders must use personal protective equipment, including gloves, protective overalls and footwear and safety glasses with side shields or safety

goggles. Respiratory protection may be required where there is inadequate ventilation and high dust concentrations. For small spills, wear eye protection and gloves.

Spill Clean-Up Procedure: Contain the spill. Sweep up spills and place in a suitable, closable chemical waste container. Alternatively, an industrial vacuum cleaner may be used to collect spilled material. Ensure waste container is properly labelled.

Waste Disposal: Refer to Section 13.

Emergency Preparation: Ensure there is appropriate and adequate personal protective equipment, trained personnel and clean up materials for management of accidental release.

7. Handling and Storage

Handling: Keep out of reach of children. Avoid generating dust. Avoid release to the environment. Avoid contact with skin and eyes. Do not eat, drink, or smoke, when using this product. Remove contaminated clothing and wash hands and face before entering eating areas.

Storage: Do not store near to food or feedstuffs. Store in a cool, dry, well-ventilated place.

8. Exposure Controls and Personal Protection

Workplace Exposure Standards NZ:

Particulates, not otherwise specified: TWA 10 mg/m^3 (inspirable dust), 3 mg/m^3 (respirable dust)
Iron salts, soluble, as Fe: TWA 1 mg/m^3

Engineering Controls: Eyewash facilities and safety showers should be provided in the work area where there is a risk of exposure to eyes and skin. If use generates dust, use engineering controls such as local exhaust ventilation to ensure workers are not exposed to levels exceeding the exposure standards.

Personal Protective Equipment: Avoid contact with skin and eyes. Avoid inhaling dust.

Hand protection: Wear protective gloves. Refer to Australian and New Zealand Standard AS/NZS 2161 for protective gloves.

Skin and body protection: Use protective clothing. Remove any contaminated clothing to avoid prolonged contact with the skin. Wash work clothes regularly. Refer to Australian and New Zealand Standard AS/NZS 4501 for occupational protective clothing.

Eye protection: Use safety glasses with side shields or safety goggles to protect eyes. Refer to AS/NZS 1336 for suitable eye and face protection.

Respiratory protection: Where there is inadequate ventilation, and use results in the formation of dust, use a respirator. Refer to AS/NZS 1715 and AS/NZS 1716 for suitable respiratory protection. Respirator selection must be based on known or

anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Other information: PPE selected must be impervious to the substance. Do not eat, smoke, or drink where material is handled, processed, or stored. Wash hands carefully before eating or smoking. Handle in accordance with safe industrial hygiene practices.

9. Physical and Chemical Properties

Description:	Solid crystalline powder	**Colour:**	Pale green
Odour:	Odourless	**Odour Threshold:**	Not determined
pH:	3.0 – 5.0	**Solubility (water, 25°C):**	Soluble
Melting Point:	> 300°C (Decomposes)	**Boiling point:**	Not determined
Flammability:	Non-flammable	**Flash Point (Closed Cup):**	Not applicable
UEL/LEL:	Not applicable	**Bulk Density:**	Not determined
Relative Density:	1.89 (water = 1)	**Vapour Density:**	Not determined
Vapour pressure (at 25°C):	Not determined	**Viscosity:**	Not applicable
Decomposition Temp:	Not available	**Autoignition Temp:**	Not applicable
Octanol/Water Partition Coefficient:	Not applicable	**Particle characteristics:**	Not available

10. Stability and Reactivity

Stability: Stable under normal storage conditions.

Reactivity: Under normal conditions of storage and use, not expected to cause any adverse reactions.

Conditions to Avoid: High temperatures. Dust formation, accumulation of large quantities of dust may result in a dust explosion. Moisture, reacts in moist air to form ferric sulphate.

Incompatibility: Keep away from strong oxidisers, alkalis, and soluble carbonates.

Hazardous Decomposition Products: Oxides of sulphur.

11. Toxicological Information

Acute Exposure

Acute Toxicity:
LD_{50} oral 300 - ≤ 2000 mg/kg
LD_{50} dermal > 5000 mg/kg
LC_{50} inhalation > 5 mg/L (dust)

Inhalation: Inhalation of dust may cause coughing and shortness of breath.

Ingestion: Harmful if swallowed. Ingestion of large quantities may cause nausea, vomiting, diarrhoea, and gastrointestinal irritation. Ingesting large quantities may affect the liver. Symptoms may be delayed for several

	hours.
Skin Corrosion/Irritation:	Product is a skin irritant and may cause itching, redness, rash.
Serious Eye Damage/Eye Irritation:	Product is an eye irritant and may cause stinging, redness, weeping.
Respiratory or Contact Sensitiser:	Not expected to be a respiratory or contact sensitiser.

Chronic Exposure:

Mutagen/Carcinogen/Reproductive Toxicant	Not expected to be carcinogenic, mutagenic or a reproductive or developmental toxicant.
Specific Target Organ Toxicity Single Exposure:	No information available. Not expected to be a specific target organ toxicant by single exposure.
Specific Target Organ Toxicity Repeated Exposure:	No information available. Not expected to be a specific target organ toxicant by repeated exposure.
Aspiration Hazard:	No information available. Not expected to be an aspiration hazard.
	Toxicity data is based on hazardous ingredient information and information in the European Chemical Agencies Database.

12. Ecological Information

Ecotoxicity:	Not expected to have harmful long-term effects in the aquatic environment. Iron sulphates are rapidly converted to insoluble iron oxides which bind tightly to soil. Iron oxides are readily found in soil and food. Harmful to terrestrial vertebrates. Some animals such as cats and dogs are unable to excrete excess levels of iron allowing build up to toxic levels in their systems. Avoid unintended release to the environment.
Aquatic toxicity:	LC_{50} > 100 mg/L
Biodegradable:	Iron oxides are persistent in soil but are insoluble and bind tightly to soil. Therefore, they are not identified as a concern for groundwater contamination.
Bioaccumulative:	No available data. Iron is readily found in soil and food and therefore harm from bioaccumulation in the environment is low.
Mobility in soil:	Low mobility.
Other adverse effects:	None known.
Ingredients with ecotoxic classifications:	Iron sulphate is classified as hazardous to terrestrial vertebrates.

Ecotoxicity classification derived from data on ingredients and information from the United States Environmental Protection Agency.

13. Disposal Considerations

Disposal: Recycle where possible. Dispose of waste product via an approved waste disposal contractor.

Disposal of Packaging: Dispose of packaging via an approved waste disposal contractor. Consumer packaging may be disposed of via household waste.

14. Transport Information

This product is not classified as a Dangerous Good for transport in accordance with NZS5433:2020, IMDG or IATA.

Ensure transportation methods prevent leakage from packages and collapsing loads.

15. Regulatory Information

Group Standard Allocation: Fertilisers (Subsidiary Hazard) Group Standard 2020

HSNO Approval Code: HSR002571

NZ Inventory of Chemicals: All components are listed in the NZ Inventory of Chemicals

This substance triggers:

Location/Compliance Certificate	N/A
Certified Handler	N/A
Emergency Response Plan	1,000kg
Secondary Containment	N/A
Signage	10,000kg

This substance is not required to be Tracked. All workplace personnel handling this substance are required to be trained on the safe handling and PPE requirements for the hazards associated with this substance.

16. Other Information

The information provided in this Safety Data Sheet relates only to the specific material designated herein. The information contained in this Safety Data Sheet is correct to the best of our knowledge.

This substance is approved under HSNO for use as a fertiliser.

SDS Created:	29 April 2025	Review Date:	29 April 2030
Supersedes:	21 June 2022		
Reason for Revision:	New address details. Update headings and information in Sections 11, 12, & 16.		

Note: the former approval number for Ferrous Sulphate Heptahydrate HSR003427 has been revoked. As such the classifications in the European Chemical Agencies Database have been used along with the New Zealand specific Hazardous to Terrestrial Vertebrates classification for Agrichemicals.

It is known that people have varying degrees of sensitivity to chemicals therefore this product should be used with caution.

The information compiled in this Safety Data Sheet has been taken from sources believed to be reliable by Morton Smith-Dawe Ltd and to represent the most up-to-date knowledge available at the date given in Section 16.

Morton Smith-Dawe Ltd assumes no liability for any damages related to the use or misuse of this substance.

References:

EPA NZ Chemical Classification and Information Database
EPA Guide: Guide to Classifying Hazardous Substances in New Zealand, Version 1

Summary of Abbreviations: EPA – Environmental Protection Authority
GHS – Global Harmonisation System
CAS – Chemical Abstracts Service
TWA – Time Weighted Average

End of Safety Data Sheet