

SAFETY DATA SHEET

Last updated: 31 May 2023

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name:	Liquid Iron
Other Names:	Plant Doctor Liquid Iron
Product Type:	Liquid iron soil nutrient
Chemical family:	FeSO ₄ , FeNa
Recommended Use:	Horticultural soil corrector
Restrictions on use:	None known
HS Code:	None known for blended product

Manufacturer:	Plant Doctor Rx Pty Ltd T/A Agtech Natural Resources 8/19 Expo Ct, Ashmore, QLD, 4214, Australia Ph: 1300 385 842 (Monday to Friday: 8.00am – 4.00pm) admin@agtechglobal.com.au	
Emergency Phone:	Poisons Information Centre	13 11 26
	EPA for large scale spills	1300 372 842

2. HAZARDS IDENTIFICATION

GHS Classification: Not classified as 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 Code for the Transport of Dangerous Goods by Road and Rail. (7th edition).

GHS Label Elements:

Warning!



Statement of Hazard	Precautionary Statements
P301+330+331 IF SWALLOWED: Rinse mouth. Do not induce vomiting. P301+312 IF SWALLOWED: Call Poisons Information if feeling unwell P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. H315 Causes skin irritation. H319 Causes serious eye irritation.	P264 Wash thoroughly after handling. P270 Do not eat, drink or smoke when handling. P280 Wear protective gloves, eye protection, and face protection. P337 + P313 If eye irritation persists: Get medical attention. P302 + P352 IF ON SKIN: Wash with plenty of soap and water. P332 + P313 If skin irritation occurs: Get medical attention. P362 Take off contaminated clothing and wash before reuse.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS No.	Amount
ferrous sulfate heptahydrate	7782-63-0	Proprietary
Iron(III)-edta sodium	15708-41-5	Proprietary
Other proprietary ingredients not deemed hazardous	Not required	proprietary

4. FIRST AID MEASURES

Eye: Immediately flush eyes with plenty of water for 15 minutes while holding the eyelids apart. Remove contact lenses, if present and easy to do. Get medical attention if irritation persists.

Skin: Remove contaminated clothing. Wash skin thoroughly with soap and water for several minutes. Get medical attention if irritation occurs and persists. Launder clothing before re-use.

Ingestion: Do not induce vomiting unless directed to do so by a medical professional. Rinse mouth with water and give one glass of water to drink. Get medical attention if symptoms develop.

Inhalation: Remove victim to fresh air. Get medical attention if symptoms occur and persist.

Most important Symptoms: May cause moderate eye and skin irritation. Inhalation of mists may cause mucous membrane and respiratory irritation.

Indication of immediate medical attention/special treatment: Immediate medical attention should not be required. Treat symptomatically.

5. FIRE FIGHTING MEASURES

Suitable (and Unsuitable) Extinguishing Media: Non-flammable

Specific Hazards arising from the chemical: None known. Hazardous decomposition materials include oxides of sulphur.

Special Protective Equipment and Precautions for Fire-Fighters: Firefighters should wear positive pressure self-contained breathing apparatus and full protective clothing for all fires involving chemicals.

Explosion Data (sensitivity to mechanical impact or static discharge): Non-flammable. No fire or explosion hazards exist.

6. ACCIDENTAL RELEASE MEASURES

Minor spills do not normally need any special cleanup measures. In the event of a major spill, prevent spillage from entering drains or water courses. As a minimum, wear overalls, goggles and gloves. Stop leak if safe to do so, and contain spill. Absorb onto sand, vermiculite or other absorbent material. Sweep up and shovel or collect recovered product into labelled containers for recycling or salvage, and dispose of promptly. After spills, wash area preventing runoff from entering drains. If a significant quantity of material enters drains, advise emergency services. This material may be suitable for approved landfill.

Personal Precautions, Protective Equipment, and Emergency Procedures: Avoid contact with the eyes. Avoid prolonged skin contact. Wear appropriate protective clothing.

Methods and Materials for Containment and Cleaning Up: Contain and collect free liquid where possible. Neutralize small spills and residues and collect using an inert absorbent material and place in appropriate containers for disposal. Prevent spill from entering sewers and water courses. Report releases as required by local, state and federal authorities.

7. HANDLING AND STORAGE

Precautions for Safe Handling: Carefully read the product label. Avoid contact with eyes, skin and clothing. Use with adequate ventilation. Avoid breathing vapors & mists. Keep containers closed when not in use. Have emergency equipment (for fires, spills, leaks, etc.) readily available. Ensure all containers are labeled. Do not reuse containers. Empty containers retain product residues which can be hazardous. Follow all SDS precautions when handling empty containers.

Conditions for Safe Storage, Including Any Incompatibilities: Store in a cool, well-ventilated area away from heat and incompatible materials listed in Section 10.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines: No Australian Exposure Standard available

Engineering Controls: Protect from splashes. Always maintain adequate ventilation. In most circumstances natural ventilation systems are adequate. Where mists are generated in an enclosed area a local exhaust ventilation system may be needed.

Respiratory Protection: Use P2 type canister respirator where high concentrations of airborne mist is present. Provision of eye wash facilities and safety shower recommended.

Skin Protection: Wear gloves or gauntlets and long sleeves when using this product to protect against skin irritation. Wash hands before eating, drinking, smoking or going to toilet.

Eye Protection: Chemical safety glasses with side shields or goggles should be worn where splashing is possible.

Other: Impervious coveralls, apron and boots as needed to avoid contact. Suitable washing facilities should be available in the work area. Launder protective clothing before re-use.

Exposure limits have not been set by SWA for any ingredients in product. The TWA exposure value is the average airborne concentration of a particular substance when calculated over a normal 8 hour working day for a 5-day working week. There is a blanket limit of 10mg/m³ for dusts or mists when limits have not otherwise been established. The STEL (Short Term Exposure Limit) is an exposure value that should not be exceeded for more than 15 minutes and should not be repeated for more than 4 times per day. There should be at least 60 minutes between successive exposures at the STEL. The term "peak" is used when the TWA limit, because of the rapid action of the substance, should never be exceeded, even briefly. ADI means Acceptable Daily Intake and NOEL means No-observable-effect-level. Values taken from Australian ADI List, 31st March 2012

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance and Odour: brown liquid with a slight metallic odour.	
Physical State: Liquid	Odour Threshold: No data
Vapor Density:	Vapor Pressure: Negligible at normal ambient temperatures
Solubility In Water: Soluble	pH: 2 - 4
Relative Density:	Evaporation Rate: No data
Melting/Freezing Point: 0°C	Boiling Point/Range: ±100°C
VOC Content:	Octanol/Water Coefficient: No data
Specific Gravity: 1.125 – 1.175	Decomposition Temperature:
Viscosity: No data	Flammability (solid, gas):
Flashpoint:	Autoignition Temperature: Not applicable - does not burn.
Flammable Limits: LEL/UEL: Not applicable	Volatility: No specific data. Expected to be low at 100°C.
	NPK: 0-0-0

10. STABILITY AND REACTIVITY

Reactivity: Will coagulate with humic. Reactions with strong reducing agents such as metal hydrides or alkaline metals, may release ammonia.

Chemical Stability: Stable under normal storage and handling conditions.

Possibility of Hazardous Reactions: May react with metals to liberate flammable hydrogengas.

Conditions to Avoid: Avoid extreme heat or freezing temperatures. Store original container. Avoid exposure to sunlight or temperature below 5°C.

Incompatible Materials: Gels and generates heat when mixed with acids, bases, strong oxidising agents. May react with ammonium salts resulting in evolution of ammonia gas. Flammable hydrogen gas may be produced on contact with aluminum, tin, lead, and zinc. Also, avoid acids and combustible materials, herbicides, fungicides and foodstuffs.

Hazardous Decomposition Products: Decomposes on overheating/fire emitting toxic compounds such as Oxides of sulphur.

Hazardous polymerization: This product is unlikely to undergo polymerisation processes

11. TOXICOLOGICAL INFORMATION

Health Hazard Summary: Low toxicity. This product may only present a hazard with eye contact, prolonged and repeated skin contact or with ingestion of large quantities.

Eye: May cause moderate to severe irritation with pain and tearing.

Skin: Will cause drying. Prolonged exposure may cause irritation, dermatitis, or defatting of skin tissues.

Ingestion: Ingestion may cause gastrointestinal irritation, abdominal pain, nausea, vomiting and diarrhea. Oral LD50 >2000 mg/kg by acute toxicity estimation.

Inhalation: If product in high concentrations of airborne mist, prolonged contact may cause irritation to the nose and throat.

Chronic: There is no data to hand indicating any particular target organs.

Sensitization: This material is not known to cause sensitization.

Carcinogenicity: None of the components present are listed as a carcinogen or suspected carcinogen by IARC, NTP, ACGIH, or OSHA.

Germ Cell Mutagenicity: No data currently available.

Reproductive Toxicity: No data available

Numerical Measures of Toxicity: no data available

12. ECOLOGICAL INFORMATION

This substance is biodegradable and unlikely to be harmful to aquatic organisms. Will not accumulate in soil or water or cause long term problems. Expected not to be an environmental hazard. Avoid contaminating waterways. No ecological problems are expected when the product is handled with due care and attention.

Ecotoxicity: Avoid contamination of waterways.

Persistence and Degradability: biodegradable

Bioaccumulative Potential: Not data available.

Mobility in Soil: Not data available.

Other Adverse Effects: None known.

13. DISPOSAL CONSIDERATIONS

Dispose in accordance with local and national environmental regulations.

14. TRANSPORT INFORMATION

Not classified as Dangerous Goods according to the Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG Code); nor by air according to the IACO (IATA Regulations), or by sea according to the IMO (IMDG Code). DOT Hazardous Materials Description: Not regulated

IMDG Shipping Description: Not regulated

IATA Shipping Description: Not regulated

UN Number: Not Dangerous Goods

15. REGULATORY INFORMATION

Not a Hazardous Chemical to the Australian GHS Criteria.

Not Dangerous Goods.

Poisons schedule: Assumed under S5.

AICIS - Aust. Inventory of Industrial Chemicals: All ingredients are on the AIC.

APVMA Approval No: Not required.

Hazard Category for Section 311/312: Refer to Section 2 for OSHA Hazard Classification.

Section 313 Toxic Chemicals: This product contains the following chemicals subject to Annual Release Reporting Requirements Under SARA Title III, Section 313 (40 CFR 372): None

Section 302 Extremely Hazardous Substances (TPQ): None

16. OTHER INFORMATION

Revision Summary:

31/05/2023: v2

06/03/2020: V1

NOTICE

This above information is believed to be correct but does not propose to be all inclusive and shall be used only as a guide. Agtech shall not be held liable for any damage resulting from handling or from contact with the above product. This information relates only to the product designated herein and does not relate to its use in combination with any other material or process.

