SAFETY DATA SHEET

IRON CHELATE 6% | REVISION 4, DATE SEPTEMBER 2026

1. IDENTIFICATION

Product Name	Iron Chelate 6%
Other Names	Fe-EDDHSA 6%; Iron EDDHSA Chelate; Ethylenediamine-N,N'-bis(2-hydroxy-5-sulfophenylacetic acid) Iron(III) Sodium Salt; Iron o,o-EDDHSA Chelate; Chelated Iron 6% Fe
Uses	Water-soluble micronutrient fertiliser. Used for correction and prevention of iron deficiency (chlorosis) in crops, particularly in neutral to alkaline (calcareous) soils, via soil application, fertigation or drip irrigation.
Product Type	Water-Soluble Fertiliser
Chemical Family	Metal chelate (aminopolycarboxylate/sulfonate ligand complex)
Chemical Formula	$C_{20}H_{14}FeN_2O_{12}S_2.Na$ (approximate, mixture/complex)
Chemical Name	Iron(III) ethylenediamine-N,N'-bis(2-hydroxy-5-sulfophenylacetate), sodium salt
Product Description	Iron chelate: 6% Fe, chelated with EDDHSA ligand

Contact Details of the Supplier of this Safety Data Sheet

Organisation	Location	Telephone
Green Pick Australia	6 Fernhill Lane Bayswater North VIC 3153 Australia	+61-426-571-061
Green Pick Iran	50 Khavaran Hwy, Industrial City Ivanaki, Taavoni 7 Tehran, Iran	+98-912-476-3248

Emergency Contact Details

For emergencies only; DO NOT contact these companies for general product advice.

Organisation	Location	Telephone
Poisons Information Centre	Australia – Westmead NSW	1800-251525 / 131126
Chemcall	Australia	1800-127406 / +64-4-9179888
Chemcall	Malaysia	+64-4-9179888
National Poison Centre	Malaysia	+60-4-6536-999
Chemcall	New Zealand	0800-243622 / +64-4-9179888
National Poisons Centre	New Zealand	0800-764766
CHEMTREC	USA & Canada	1-800-424-9300 CN723420 / +1-703-527-3887

2. HAZARD IDENTIFICATION

Poisons Schedule (Aust)	Not Scheduled

Globally Harmonised System

Hazard Classification	NOT hazardous according to the criteria of the Globally Harmonised System of Classification and Labelling of Chemicals (GHS)
Signal Word	None

National Transport Commission (Australia)

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

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)

Green Pick Australia
Corporate Office Melbourne
6 Fernhill Lane, Bayswater North, VIC 3153 Australia
All Deliveries: 6 Fernhill Lane, Bayswater North, VIC 3153 Australia

Phone +61 426 571 061
Email info@greenpick.com.au
Web www.greenpick.com.au

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Safe Work Australia

National Guide for Classifying Hazardous Chemicals under the Model WHS Regulations

Hazard Classification	NOT hazardous according to the criteria of Safe Work Australia under Model WHS Regulations

Possible physical effects of dust: may cause mechanical irritation to eyes, skin and the respiratory tract due to fine particulate nature. Not classified as an oxidiser, flammable solid, or corrosive.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients

Chemical Entity	Formula	CAS Number	Proportion
Iron (III) EDDHSA chelate complex, sodium salt	$C_{20}H_{14}FeN_2O_{12}S_2.Na$	Not Assigned (UVCB reaction product)	>= 90 %
EDDHSA ligand (free acid, ref. component)	$C_{11}H_{16}N_2O_{12}S_2$	57368-07-7	Trace/complexed
Leonardite-derived organic carrier / humic substances	Complex mixture	Mixture	< 10 %
Sulfur (elemental, where present)	S	7704-34-9	< 5 %
Water and processing residues	—	—	Balance

Note: Iron EDDHSA chelate is manufactured as a reaction product (UVCB substance) and does not have a single assigned CAS Registry Number. The CAS number shown for EDDHSA refers to the uncomplexed ligand and is provided for reference only.

4. FIRST AID MEASURES

Description of necessary measures according to routes of exposure

Swallowed	IF SWALLOWED: Rinse mouth, then drink plenty of water. Get medical advice/attention if discomfort occurs. Never give anything by mouth to an unconscious person.
Inhaled	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If respiratory symptoms persist, get medical advice/attention.
Eye	IF IN EYES: Immediately flush eyes with running water for several minutes, holding eyelids open and occasionally lifting the upper and lower lids. Remove contact lenses if present and easy to do. Continue rinsing for at least 15 minutes. If eye irritation persists, get medical advice/attention.
Skin	IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash it before reuse. If skin irritation occurs, get medical advice/attention.
Most Important Symptoms and Effects	May cause mechanical irritation to eyes, skin and respiratory tract due to dust. No other significant symptoms known.
Advice to Doctor	Treat symptomatically.
Medical Conditions Aggravated by Exposure	No information available.

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5. FIRE FIGHTING MEASURES

General Measures	If safe to do so, move undamaged containers from fire area. Cool containers with water spray until well after fire is out. Dike fire-control water for later disposal.
Flammability Conditions	May burn but does not ignite readily.
Extinguishing Media	Use dry chemical, carbon dioxide (CO2), foam or water spray for extinction. Do not scatter spilled material with high-pressure water streams.
Fire and Explosion Hazard	Avoid generating dust; fine organic/mineral dust dispersed in air in sufficient concentrations, and in the presence of an ignition source, is a potential dust explosion hazard.
Hazardous Products of Combustion	Thermal decomposition can release irritating gases and vapours, including oxides of nitrogen and sulfur (SOx).
Special Fire Fighting Instructions	Contain runoff from fire control or dilution water – runoff may cause pollution.
Personal Protective Equipment	Wear positive pressure self-contained breathing apparatus (SCBA). Structural firefighters' protective clothing will only provide limited protection.
Flash Point	Not applicable (solid)
Lower Explosion Limit	No Data Available
Upper Explosion Limit	No Data Available
Auto Ignition Temperature	> 200 °C (estimated, analogous chelates)
Hazchem Code	No Data Available

6. ACCIDENTAL RELEASE MEASURES

General Response Procedure	Ensure adequate ventilation, especially in confined areas. Eliminate all ignition sources (if dust clouds can occur). Do not touch or walk through spilled material. Avoid generating dust. Avoid breathing dust and contact with eyes, skin and clothing.
Personal Precautionary Measures	Do not attempt to take action without suitable protective equipment (see SECTION 8).
Environmental Precautionary Measures	Avoid release to the environment. Prevent the product from entering drains or waterways.
Containment	Stop leak if you can do it without risk. Prevent dust cloud. Prevent entry into waterways, sewers, basements or confined areas.
Clean Up Procedures	Take up mechanically. Sweep up and shovel into suitable containers for disposal (see SECTION 13).
Decontamination	Flush remainder with water.
Evacuation Criteria	Spill or leak area should be isolated. Keep unauthorised personnel away.

7. HANDLING AND STORAGE

Handling	Safety showers and eyewash facilities should be provided within the immediate work area for emergency use. Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Minimise dust generation and accumulation. Avoid breathing dust and contact with eyes, skin and clothing. Do not ingest. Use personal protective equipment as required (see SECTION 8). Dry powders can build static electricity charges when subjected to the friction of transfer and mixing operations; provide adequate precautions such as electrical grounding and bonding.
Storage	Store in a cool, dry and well-ventilated place, out of direct sunlight. Keep container tightly closed. Containers which are opened should be properly resealed and kept upright to prevent leakage. Protect from moisture. Keep away from heat and sources of ignition – No smoking. Keep away from foodstuffs and incompatible materials (see SECTION 10).
Container	Keep in the original container.
Incompatible Materials	Strong oxidising agents, strong acids, strong bases.

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8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General	No specific exposure standards are established for this product. For Iron salts, soluble (as Fe): Safe Work Australia Exposure Standard TWA = 1 mg/m³; New Zealand Workplace Exposure Standard TWA = 1 mg/m³.
Engineering Measures	A system of local and/or general exhaust ventilation is recommended to keep employee exposure to dust as low as possible. Local exhaust ventilation is generally preferred as it controls emissions at the source.
Respiratory Protection	In case of inadequate ventilation, wear respiratory protection. Recommended: dust mask/particulate respirator (refer to AS/NZS 1715 & 1716).
Eye/Face Protection	Wear appropriate eye protection to avoid eye contact. Recommended: chemical goggles or face shield with safety glasses.
Hand Protection	Handle with gloves. Recommended: chemically resistant protective gloves.
Skin/Body Protection	Wear appropriate personal protective clothing to avoid skin contact. Recommended: overalls, safety shoes.
Work Hygienic Practices	Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Take off contaminated clothing and wash it before reuse. Routine housekeeping should be instituted to ensure dust does not accumulate on surfaces.
Biological Limits	No information available.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Solid
Appearance	Fine powder
Colour	Dark reddish-brown
Odour	No odour
pH (1% solution in water)	7.0 – 9.0
Water Solubility	≥ 99% (fully water-soluble)
Iron (Fe) Content	≥ 6%
Chelating Agent Content (EDDHSA assay)	≥ 90%
Melting Point	Decomposes before melting
Boiling Point	Not applicable (solid)
Flash Point	Not applicable
Auto Ignition Temperature	> 200 °C (estimated)
Decomposition Temperature	No Data Available
Vapour Pressure	Not applicable
Relative Vapour Density	Not applicable
Bulk Density	500 – 700 kg/m³ (typical)
Specific Gravity	No Data Available
Particle Size	Fine powder, predominantly < 1 mm
Partition Coefficient (n-octanol/water)	Not determined (ionic chelate complex)
Evaporation Rate	Not applicable
Viscosity	Not applicable (solid)
VOC Content	Not applicable
Explosive Properties	Not classified as explosive; combustible dust hazard possible under specific conditions (see SECTION 5 & 10)
Oxidising Properties	Not classified as oxidising

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10. STABILITY AND REACTIVITY

General Information	No dangerous reactions known under normal conditions of use.
Chemical Stability	Stable under normal conditions of storage and handling. Chelate stability is optimal near neutral to mildly alkaline pH.
Conditions to Avoid	Avoid generating dust. Avoid prolonged exposure to moisture/humidity. Keep away from heat and sources of ignition. Take precautionary measures against static discharge.
Materials to Avoid	Strong oxidising agents, strong acids, strong bases.
Hazardous Decomposition Products	Under normal conditions of storage and use, hazardous decomposition products should not be produced. Thermal decomposition can release irritating gases/vapours, including nitrogen oxides and sulfur oxides.
Hazardous Polymerisation	Will not occur.

11. TOXICOLOGICAL INFORMATION

General Information	Acute toxicity: Not classified. Skin corrosion/irritation: Not classified. Eye damage/irritation: Not classified. Respiratory/skin sensitisation: Not classified. Germ cell mutagenicity: Not classified. Carcinogenicity: Not classified. Reproductive toxicity: Not classified. STOT (single exposure): Not classified. STOT (repeated exposure): Not classified. Aspiration toxicity: Not classified.
Likely Routes of Exposure	Ingestion may cause mild irritation to mucous membranes. Dust may cause mechanical irritation to eyes and respiratory tract. Not expected to be irritating to skin under normal use.
Ingestion (Oral)	Acute toxicity (analogous iron chelates): LD50, Rat: > 2,000 mg/kg bw (read-across, structurally similar aminopolycarboxylate iron chelates)
Dermal	Acute toxicity (analogous iron chelates): LD50, Rat: > 2,000 mg/kg bw (read-across)
Inhalation	Inhalation of dust in high concentration may cause irritation of the respiratory system.
Chronic Effects	No information available.
Carcinogen Category	None

Note: Toxicological data for this specific formulation has not been independently determined. Values shown are indicative, based on read-across from structurally related iron aminopolycarboxylate/sulfonate chelate fertilisers, and are provided for guidance only.

12. ECOLOGICAL INFORMATION

Ecotoxicity	Aquatic toxicity data specific to this product is not available. Iron chelate fertilisers of this class are generally of low acute aquatic toxicity at recommended agricultural application rates; however, elevated concentrations may affect aquatic organisms.
Persistence/Degradability	The EDDHSA ligand is considered to have improved biodegradability relative to EDTA-type chelates, though it is not readily biodegradable under standard OECD test conditions.
Bioaccumulation Potential	Not expected to bioaccumulate, based on the ionic and highly water-soluble nature of the chelate complex.
Mobility	Highly mobile in soil/water due to high water solubility; this is intended, as the product is applied as a soil/fertigation micronutrient source.
Environmental Fate	The product is not considered to cause long-term adverse effects on the environment when used as directed as an agricultural fertiliser.
Environmental Impact	No Data Available

13. DISPOSAL CONSIDERATIONS

General Information	This material and its container must be disposed of in a safe manner. Collect and reclaim waste from residues/unused product(s) or dispose of in sealed containers at a licensed waste disposal site and in accordance with local/regional/national regulations.
Contaminated Packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

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14. TRANSPORT INFORMATION

Land Transport (Australia) – ADG Code

Proper Shipping Name	Iron Chelate 6%
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
Comments	NON-DANGEROUS GOODS: Not regulated for LAND transport.

Land Transport (Malaysia) – ADR Code

Proper Shipping Name	Iron Chelate 6%
Comments	NON-DANGEROUS GOODS: Not regulated for LAND transport.

Land Transport (Iran)

Proper Shipping Name	Iron Chelate 6%
Comments	NON-DANGEROUS GOODS: Not regulated for LAND transport.

Sea Transport – IMDG Code

Proper Shipping Name	Iron Chelate 6%
UN Number	No Data Available
Marine Pollutant	No
Comments	NON-DANGEROUS GOODS: Not regulated for SEA transport.

Air Transport – IATA DGR

Proper Shipping Name	Iron Chelate 6%
Comments	NON-DANGEROUS GOODS: Not regulated for AIR transport.
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)

15. REGULATORY INFORMATION

Poisons Schedule (Aust)	Not Scheduled
General Information	Product is manufactured for use as an agricultural fertiliser/plant nutrient. Users should confirm local fertiliser registration requirements in the country of sale prior to distribution.

National/Regional Inventories

Inventory	Status
Australia (AIIC)	Components Listed
New Zealand (NZIoC)	Components Listed
Europe (REACh/EINECS)	Not Determined for this specific complex – see Section 3 remarks
USA (TSCA)	Components Listed or Exempt
Malaysia (List of Classified Substances)	Not Listed
Iran (National Chemical Inventory)	Not Determined

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16. OTHER INFORMATION

<	Less Than	>	Greater Than
CAS	Chemical Abstracts Service (Registry Number)	EDDHSA	Ethylenediamine-N,N'-bis(2-hydroxy-5-sulfophenylacetic acid)
Fe	Iron	g/l	Grams per Litre
GHS	Globally Harmonised System of Classification and Labelling of Chemicals	kg/m³	Kilograms per Cubic Metre
LD50	Lethal Dose, 50% – the amount of a material, given all at once, which causes the death of 50% of a group of test animals	mg/kg	Milligrams per Kilogram
mg/m³	Milligrams per Cubic Metre	N/A	Not Applicable
OECD	Organisation for Economic Co-operation and Development	ppm	Parts per Million
STOT	Specific Target Organ Toxicity	TWA	Time Weighted Average
UN	United Nations	UVCB	Substance of Unknown or Variable composition, Complex reaction products or Biological materials

Revision	4
Revision Date	September 2026
Supersedes	Version 3, June 2026

This Safety Data Sheet has been prepared using available literature and read-across data for structurally similar iron aminopolycarboxylate/sulfonate chelate fertilisers, together with the specifications provided by Green Pick Australia for this product. To the best of our knowledge the information contained herein is accurate as of the date of issue; it is provided without warranty, expressed or implied. It is the responsibility of the user to determine the suitability of this information for their particular use and to comply with all applicable local, national and international regulations.

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