

SAFETY DATA SHEET

ACCORDING TO THE SOUTH AFRICAN REGULATIONS FOR HAZARDOUS CHEMICAL AGENTS - 2021

FERRO-SUPER

Revised on / Version: 30/09/2022 / 0003
Replaces Revision of / Version: 19/09/2019 / 0002

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SECTION 1: Product and Company Identification

Identification of the product/preparation

| | |
|-------------------------------|--|
| Product Name: | FERRO-SUPER |
| Trade Name/Synonyms: | FERRO-SUPER |
| Registration Number: | B4915 |
| Product Description and Type: | High purity water soluble 6 % Fe EDDHA chelate powder for use as a soil application to correct iron deficiencies in crops as listed. |

Active Ingredient

| | |
|-------------|--------------------------------|
| Formula: | K ₂ PO ₃ |
| CAS Number: | 13492-26-7 |

Supplier

Company Name: Rolfes Agri (Pty) Ltd
Address: 288 Mundt Street
Waltloo
Pretoria
South Africa
Phone Number: +27(0)12 803 0145
E-mail Address: info@rolfesagri.co.za

Emergency Phone Numbers

| Nature of Emergency | Emergency Operator | Telephone Number |
|--|--|---|
| Office Hour Poisoning Helpline | Rolfes Agri (Pty) Ltd. | Tel: +27 (12) 803 0145 |
| Spill Response and Transport Incidents | Spill Tech, Oil and chemical pollution control | 086 100 0366 083 253 6618 www.spilltech.co.za |



Relevant identified uses of the product and uses advised against

For use in Agriculture and use as per the product label.

SECTION 2: Hazards Identification**Classification of the substance or mixture**

This product is classified as hazardous according to the criteria in South Africa - GHS classification and labelling of chemicals, the Regulations for Hazardous Chemical Agents, 2021.

Classification:

Not classified as a hazardous substance.

Label Elements

South Africa. GHS classification and labelling of chemicals and the Regulations for Hazardous Chemical Agents, 2021.

Pictograms:

No pictogram

Signal Word:

No signal word

Hazard Statements:

No hazard statements.

Precautionary Statements:**General -**

| Statement Number | Precautionary Statement |
|------------------|---|
| P101 | If medical advice is needed, have container or label at hand. |
| P102 | Keep out of reach of children. |
| P103 | Read carefully and follow all instructions |

Other Hazards

None.

SECTION 3: Composition/Information on Ingredients**Mixture or Substance**

| | |
|-----------------------------|---|
| Common Name: | Iron EDDHA |
| IUPAC/Chemical Name: | sodium;[carboxy-(2-hydroxyphenyl)methyl]-[2-[carboxy-(2-hydroxyphenyl)methyl]azanidylethyl]azanide;iron |
| Chemical Family: | |
| Formulation: | 60 g/kg |

Ingredients with Hazard Concerns (GHS)

According to UN GHS criteria.

NOTE: There are no other ingredients present according to the current knowledge of the supplier (condisering their concentrations present in the product) that are classified as hazardous to health or the environment and that cause/contribute to the correct GHS classification of this Product. These ingredients are therefore, in terms of the South African Hazardous Chemical Agent Regulations 2021; Regulation 14(b), not listed.

SECTION 4: First-Aid Measures

Description of First-aid Measures

| | |
|-----------------------|---|
| General Advice | The symptoms resulting from direct exposure to the product could appear a while after exposure. If there is persistent discomfort, seek medical attention. Provide this SDS to medical personnel for treatment. Immediately remove contaminated clothing and remove the affected person from the contamination area. Keep the person warm, calm and covered up. First Aid personnel should pay attention to their own safety. |
| Eye Contact | Flush eyes with water as a precaution. |
| Skin Contact | Remove all contaminated clothing and shoes. Wash contaminated clothing before re-use. Rinse the skin immediately with plenty of water. |
| Inhalation | Remove the affected victim from exposure to an area with fresh air as a precaution. If not breathing, administer artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Obtain immediate medical attention. |
| Ingestion | If conscious, rinse mouth thoroughly with water. Never give anything by mouth to an unconscious or convulsing person. Do not induce vomiting unless directed to do so by a medical professional. If spontaneous vomiting occurs, have victim lean forward with head down to avoid breathing in of vomits, rinse mouth and administer more water. |

Most important symptoms/effects, acute and delayed Symptoms of exposure to the product include: None.

Indication of any immediate medical attention and special treatment needed

Notes to physician: None

Specific treatments: Treat symptomatically and supportively.

SECTION 5: Firefighting Measures

| | |
|--|---|
| Suitable (and unsuitable) extinguishing media | Use carbon dioxide, dry chemical, alcohol resistant foam, or water spray. Do not use water jets. |
| Specific hazards arising from the chemical including thermal decomposition products | Fires involving the product may produce irritating or poisonous vapours, mists or other products of combustion. Closed containers may explode form vapour expansion in high heat. |
| Special protective equipment and precautions for fire-fighters | Firefighters must wear emergency equipment including positive pressure self-contained breathing apparatus with a full-face mask. Remove unaffected containers from fire area if possible. |

Additional provisions

Act in accordance with the site's Internal Emergency Plan and the Workplace Specific Procedures for actions to be taken after an accident or other emergencies.

SECTION 6: Accidental Release Measures**Personal precautions, protective equipment, and emergency procedures**

Do not breathe in dust/fumes/vapour and avoid contact with eyes, skin and clothes.

Ventilate the area of the spill or leak, especially when in confined areas.

Do not touch or walk through spilled material as slippery when spilt.

Wear appropriate protective clothing recommended in Section 8 of the SDS.

Environmental Precautions

Prevent spillage or further leakage if safe to do so.

Do not allow the spilt product to enter water courses and drains and avoid contact with soil.

Do not allow the spilt product to spread to other areas - keep the spilt material contained and isolated.

Report spills and releases as required to appropriate authorities if the spilt product has caused environmental pollution (sewers, water ways, soil or air).

Methods for cleaning up

For small spills, sweep up with damp absorbent material. Place into a labelled waste container subsequent reclamation or disposal. Keep the wash water out of drains, sewers and waterways.

For large spills, sweep up with absorbent material. Avoid creating dusty conditions and prevent wind dispersal and place the residues into a suitable container for proper disposal. Keep the wash water out of drains, sewers and waterways.

Reference to other sections

See Section 1 for emergency contact information.

See Section 8 for information on appropriate personal protective equipment.

See Section 13 for additional waste treatment information.

SECTION 7: Handling and Storage**Precautions for safe handling**

Always provide good ventilation in the work area. Prevent contact with eyes, skin and clothing. Do not breathe in dust/vapours/spray mists. Wear protective clothing and equipment during handling as described in Section 8 of the SDS.

Do not eat or drink during use. Wash the hands and face thoroughly with soap after handling.

Keep containers closed when not in use. Do not permit smoking in use or storage areas.

Locate emergency showers and eye-rinsing facility near the work/handling area. Maintain good normal industrial hygiene and housekeeping practices in areas where the product is used/handled.

Conditions for safe storage, including any incompatibilities

Always store locked up and keep containers tightly closed when not in use. Store in a cool, dry and well ventilated place, out of direct sunlight. Check storage containers regularly for leaks and protect containers from physical damage. Store in the original container, avoid cross contamination with other agricultural products. Keep out of reach of children,

uninformed persons and animals. Do not contaminate water, food, or feed by storage or disposal.

It is recommended to have appropriate spill control kits equipped with absorbent material in close proximity to storage areas (see Section 6).

Specific end use(s)

Use as directed. Use original container.

SECTION 8: Exposure Controls and Personal Protection

Occupational exposure limits – Restricted limits for hazardous chemical agents.

| Component | Type | Control Parameter | Update | Basis |
|-----------------|--------------------|-------------------|--------|---------------------|
| Not applicable. | OEL-eight hour TWA | N/A | 2021 | South African RELs* |
| | OEL-STEL/C | N/A | 2021 | South African RELs* |

*REL: Recommended Exposure Limit.
 OEL-eight hour TWA: Occupational Exposure Limit- Time Weighted Average. Calculated over an eight-hour working day, for a five-day working week.
 OEL-STEL/C: Occupational Exposure Limit – short Term Exposure Limit /Ceiling Limit. Peak airborne concentration determined over the shortest analytically practicable period of time, which does not exceed 15 minutes.

National Biological Exposure Indices (BEIs) for hazardous chemical agents.

| Component | Sample Matrix | Sample Time | Value |
|-----------|---------------|-------------|-------|
| None | | | |

Appropriate engineering controls

Good general ventilation should be sufficient to maintain airborne concentrations and exposure below occupational exposure limits.

Personal Protective Equipment

| | |
|----------------------------------|--|
| Respiratory Protection: | Respiratory protection selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. Use a properly fitted and well maintained particulate filter respirator, complying with an approved standard. Respirator selection and use should be based on contaminant type, form and concentration. For emergency conditions, use an approved positive-pressure self-contained breathing apparatus. |
| Skin and Hand Protection: | Select skin and hand protection based on the task being performed and the risks involved with the task. The gloves should be replaced immediately in case of damage or signs of wear. The personal protective clothing must be properly fitted and well maintained. |
| Eye/Face Protection: | Select safety eye/face protection based on the task being performed and the risks involved with the task. Wear tightly |

| | |
|--------------------------|---|
| | fitted and well maintained safety eyewear compliant with an approved standard. |
| Hygiene Measures: | Wash the hands and/or face before breaks, eating, smoking or using the lavatory and at the end of the shift/working period. Eye wash fountains and safety showers should be available and easily accessible. Wash contaminated clothing before reuse. |

Environmental exposure controls

In accordance with the local legislation for the protection of the environment it is recommended to avoid environmental spillage or releases of both the product and its container.

SECTION 9: Physical and Chemical Properties

Data applicable to ingredient

| | | |
|----------------------------|---|------------------------|
| Appearance | Appearance/physical state | Dry flowable granules. |
| | Odour characteristics | Mild. |
| | Colour | Dark red to black. |
| Volatility | Boiling point (°C) | Not applicable. |
| | Vapour pressure (Pa) | Not applicable. |
| | Evaporation Rate at 20 °C | Not applicable. |
| Product Description | Relative density (kg/m ³ , relative density of water =1) | Not applicable. |
| | Solubility in water (g/100mL) | 120 g/L |
| | Decomposition temperature (°C) | Not applicable. |
| | Melting point/freezing point (°C) | Not applicable. |
| | pH | 8-9 |
| | Density/relative density (g/cm ³) | Not applicable. |
| Flammability | Particle characteristics | Not applicable. |
| | Flammable (Y/N) | Not flammable. |
| | Flash point (°C) | Not flammable. |
| | Flammable limits-LEL | Not flammable. |
| | Auto-ignition Temperature (°C) | Not flammable. |

*Not relevant due to the nature of the product, not providing information property of its hazards.

Other Hazard Information

None.

SECTION 10: STABILITY AND REACTIVITY

Reactivity

The product is stable under normal conditions

Chemical Stability

Stable under normal ambient conditions of use, storage and transport.

Possibility of Hazardous Reactions

None known under conditions of normal use

Conditions to Avoid

Avoid extreme temperatures (>50°C). Keep away from heat and ignition sources.

Incompatible Materials

Incompatible with: Avoid strong oxidizing agents and acids.

Hazardous Decomposition Products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological Information

Information on likely routes of exposure

Toxic kinetics, metabolism and distribution:

Non-human toxicological data: No Information available.

Method: No Information available.

Dosage: No Information available.

Routes of administration: No Information available.

Results: No Information available.

Absorption: No Information available.

Distribution: No Information available.

Metabolism: No Information available.

Excretion: No Information available.

Information on toxicological effects:

Acute toxicity: Does not meet the GHS Classification criteria.

Acute oral toxicity: Does not meet the GHS Classification criteria.

Acute dermal toxicity: Does not meet the GHS Classification criteria.

Acute inhalation toxicity: Does not meet the GHS Classification criteria.

Skin corrosion/irritation: Does not meet the GHS Classification criteria.

Serious eye damage/irritation: Does not meet the GHS Classification criteria.

Respiratory or skin sensitization: Does not meet the GHS Classification criteria.

Germ cell mutagenicity: Does not meet the GHS Classification criteria.

Carcinogenicity: Does not meet the GHS Classification criteria.

Reproductive toxicity: Does not meet the GHS Classification criteria.

STOT-single exposure: Does not meet the GHS Classification criteria.

STOT-repeated exposure: Does not meet the GHS Classification criteria.

Aspiration hazard: Does not meet the GHS Classification criteria.

SECTION 12: Ecological Information

Ecotoxicity

Short-term (Acute) hazard Aquatic: Does not meet the GHS Classification criteria.

Long-term (Chronic) hazard Aquatic: Does not meet the GHS Classification criteria.

Bio-degradability in the aquatic environment: No information available.

Other Environmental and Adverse Effects:

Persistence and Degradability: Potassium Phosphite.

Biodegradation does not need to be tested because the substance is inorganic.

Bioaccumulative Potential: Potassium Phosphite.

BCF (Aquatic Species): 0.5 L/kg ww

Mobility in Soil:

No information available.

Other Adverse Effects:

None Known

SECTION 13: Disposal Considerations

Waste handling and disposal

Dispose product related waste in accordance with all local regulations and prevent the contamination of water, food, or feed by storage or disposal of the waste.

General container handling

Empty all pesticides from the container by placing it upside down over the spray tank and holding it there for at least 30 seconds. Puncture the rinsed container to render it useless and send to a recycler. Do not use empty containers for any other purpose.

SECTION 14: Transport Information

| | Land Transport (ADR/RID) | Inland Waterways (AND/ADNR) | See Transport (IMDG) | Air Transport (ICAO-TI/IATA-DGR) |
|---|---------------------------------|------------------------------------|-----------------------------|---|
| UN Number | - | - | - | - |
| UN Proper Shipping Name | - | - | - | - |
| Transport Hazard Class | - | - | - | - |
| Transport Hazard Class Pictogram | - | - | - | - |
| Transport Subsidiary Class | - | - | - | - |
| Packaging Group | - | - | - | - |
| Environmental Hazard | - | - | - | - |

Not classified as dangerous goods.

SECTION 15: Regulatory Information

Safety, health and environmental regulations/legislation for the mixture.

South Africa

Regulations for Hazardous Chemical Agents – 2021 – SA Occupational Health and Safety Act. - Handling, labelling and Safety Data Sheets for hazardous and GHS classified substances and mixtures. Occupational Exposure Limits.

Hazardous Substances Act, 1973 (Act No.15 of 1973) - Requirements on the prohibition and control of the importation, manufacture, sale, use, operation, application, modification, disposal or dumping of hazardous substances.

Occupational Health and Safety Act No. 85 of 1993.- Occupational Health and Safety Standards for employers and users working with and around hazardous chemical substances.

National Road Traffic Act, 1996 (ACT NO. 93 of 1996). - The identification and classification of dangerous goods for transport by road and rail modes.

Botswana

Pesticides and Toxic Substances Regulations. 1994 (2006) - Control and management of pesticides and other toxic substances.

Environmental and Pollution Control Act. 1990 - Hazardous waste disposal, hazardous substances, pesticides and effluent waste water/discharge.

Namibia

Labour Act 11 of 2007 - Hazardous substances classification, labelling, Chemical Safety Data Sheets and Occupational Exposure Limits. Notification of the use of carcinogens and other controlled substances.

Regulations relating to the Health and Safety of Employees at Work Government Notice 156 of 1997. Labour Act 11 of 2007 schedule, item 2(2). - Occupational Health and Safety Standards for employers and users working with and around hazardous chemical substances.

SECTION 16: Other Information

Indication of changes

Alignment to the GHS.

Relevant classification and H-Statements (Number and full text):

Not Applicable.

Key to Abbreviations

| | |
|--------------------|--|
| AND | European Provisions concerning the International Carriage of Dangerous Goods by inland Waterways |
| ADR | The European Agreement concerning the International Carriage of Dangerous Goods by Road |
| ATE | Acute Toxicity Estimate |
| COD | Chemical Oxygen Demand |
| GHS | Globally Harmonised System of Classification and Labelling of Chemicals |
| IATA | International Air Transport Association |
| ICAO | International Civil Aviation Organisation |
| IMDG | International Maritime Dangerous Goods |
| Log _{POW} | Logarithm of the octanol/water partition coefficient |
| LD50 | Lethal Dose 50 |
| LC50 | Lethal Concentration 50 |
| RID | The Regulations concerning the International Carriage of Dangerous Goods by Rail |
| SDS | Safety Data Sheet |
| UN | United Nations |

Notice to Reader

The information contained in this Safety Data Sheet relate only to the specific product and do not relate to the use of the product in combination with any other product or process.

Information in the SDS is supplied to the best of ROLFES AGRI (PTY) LTD's knowledge and are believed to be current and correct as of the date on this SDS. All reasonable efforts were

exercised to compile this SDS in accordance with the Globally Harmonized System of Classification and Labelling of Chemicals (GHS).

The SDS only provides information applicable to the health, safety and environmental hazards of this product at the date of issue in order to facilitate the safe use, handling, storage and transport of this product and does not replace any product information or product specifications.

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