

1. Identification

Product identifier Chelated Liquid Iron
Other means of identification None
Recommended use Agriculture / Horticulture - Liquid Micronutrient Solution
Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information**Manufacturer**

Company name Southern Agricultural Insecticides, Inc.
Address P.O. Box 218
Palmetto, FL 34220
Telephone (941)-722-3285
Website southernag.com
Emergency phone number CHEMTREC (24 hours): 1-800-424-3900

2. Hazard(s) identification

Physical hazards Not classified.
Health hazards Acute toxicity, oral Category 4
Skin corrosion/irritation Category 2
Serious eye damage/eye irritation Category 2
Environmental hazards Not classified.
OSHA defined hazards Not classified.

Label elements

Signal word Warning
Hazard statement Harmful if swallowed. Causes skin irritation. Causes serious eye irritation.
Precautionary statement
Prevention Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Wear protective gloves. Wear eye/face protection.
Response If swallowed: Call a poison center/doctor if you feel unwell. If on skin: Wash with plenty of water. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Specific treatment (see this label). Rinse mouth. If skin irritation occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention. Take off contaminated clothing and wash before reuse.
Storage Store away from incompatible materials.
Disposal Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazard(s) not otherwise classified (HNOC)
Supplemental information

None known.

74.95% of the mixture consists of component(s) of unknown acute oral toxicity.

3. Composition/information on ingredients

Mixtures

| Chemical name | Common name and synonyms | CAS number | % |
|------------------------------------------|--------------------------|------------|------------|
| FERROUS SULFATE | | 7782-63-0 | 20 - < 30* |
| Other components below reportable levels | | | 70 - < 80 |

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

Inhalation

Move to fresh air. Call a physician if symptoms develop or persist.

Skin contact

Remove contaminated clothing. Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse.

Eye contact

Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.

Ingestion

Rinse mouth. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Get medical advice/attention if you feel unwell. Get medical attention if symptoms occur.

Most important symptoms/effects, acute and delayed

Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause redness and pain. Severe eye irritation.

Indication of immediate medical attention and special treatment needed

Provide general supportive measures and treat symptomatically. Keep victim warm. Keep victim under observation. Symptoms may be delayed.

General information

Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance.

5. Fire-fighting measures

Suitable extinguishing media

Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).

Unsuitable extinguishing media

Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical

During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters

Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Fire-fighting equipment/instructions

Move containers from fire area if you can do so without risk.

Specific methods Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up
Large Spills: This material is classified as a water pollutant under the Clean Water Act and should be prevented from contaminating soil or from entering sewage and drainage systems which lead to waterways. Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.
Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.
Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

Environmental precautions Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling Do not taste or swallow. Avoid contact with eyes. Avoid contact with eyes, skin, and clothing. Provide adequate ventilation. Wear appropriate personal protective equipment. When using, do not eat, drink or smoke. Wash hands thoroughly after handling. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities Store in original tightly closed container. Keep container tightly closed. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits No exposure limits noted for ingredient(s).
Biological limit values No biological exposure limits noted for the ingredient(s).
Appropriate engineering controls Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.

Individual protection measures, such as personal protective equipment

| | |
|--------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Eye/face protection | Face shield is recommended. Wear safety glasses with side shields (or goggles). |
| Skin protection | |
| Hand protection | Wear appropriate chemical resistant gloves. |
| Other | Wear appropriate chemical resistant clothing. |
| Respiratory protection | In case of insufficient ventilation, wear suitable respiratory equipment. Respiratory protection not required. |
| Thermal hazards | Wear appropriate thermal protective clothing, when necessary. |
| General hygiene considerations | Keep away from food and drink. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. |

9. Physical and chemical properties

| | |
|----------------------------------------------|-----------------------------------------|
| Appearance | Aqueous solution. |
| Physical state | Liquid. |
| Form | Liquid. |
| Color | Dark brown |
| Odor | Woody. |
| Odor threshold | Not available. |
| pH | Not available. |
| Salt-Out / Crystallization Temp | < 32 °F « 0 °C) estimated |
| Melting point/freezing point | 15 - 25 °F (-9.44 - -3.89 °C) estimated |
| Initial boiling point and boiling range | > 212 °F (> 100°C) estimated |
| Flash point | Not available. |
| Evaporation rate | Not available. |
| Flammability (solid, gas) | Not available. |
| Upper/lower flammability or explosive limits | |
| Flammability limit - lower (%) | Not available. |
| Flammability limit - upper (%) | Not available. |
| Explosive limit -lower (%) | Not available. |
| Explosive limit - upper %() | Not available. |
| Vapor pressure | 0.00001 hPa estimated |
| Vapor density | Not available. |
| Relative density | 1.15 - 1.2 g/cm3 |
| Solubility(ies) | |
| Solubility (water) | 100% |
| Partition coefficient (n-octanol/water) | Not available. |
| Auto-ignition temperature | Not available. |
| Decomposition temperature | Not available. |
| Viscosity | Not available. |
| Other information | |
| Percent volatile | 70.66% estimated |
| pH in aqueous solution | 3.2 - 3.8 10 Solution |

Pounds per gallon 9.63 - 10.03 lb/gal
Shelf life > 2 years

10. Stability and reactivity

Reactivity The product is stable and non-reactive under normal conditions of use, storage and transport.

Chemical stability Material is stable under normal conditions.

Possibility of hazardous reactions Hazardous polymerization does not occur.

Conditions to avoid Contact with incompatible materials.

Incompatible materials Strong oxidizing agents.

Hazardous decomposition products No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Ingestion Harmful if swallowed.

Inhalation No adverse effects due to inhalation are expected.

Skin contact Causes skin irritation.

Eye contact Causes serious eye irritation.

Symptoms related to the physical, chemical and toxicological characteristics Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. Severe eye irritation. May cause redness and pain.

Information on toxicological effects

Acute toxicity Harmful if swallowed. Not known.

Skin corrosion/irritation Causes skin irritation.

Serious eye damage/eye irritation Causes serious eye irritation.

Respiratory or skin sensitization

Respiratory sensitization Not available.

Skin sensitization This product is not expected to cause skin sensitization.

Germ cell mutagenicity No data available to indicate product or any components present at greater than 0.1 are mutagenic or genotoxic.

Carcinogenicity This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)
Not listed.

Reproductive toxicity This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity - single exposure Not classified.

Specific target organ toxicity - repeated exposure Not classified.

Aspiration hazard Not available.

12. Ecological information

| | |
|-------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Ecotoxicity | The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment. |
| Persistence and degradability | No data is available on the degradability of this product. |
| Bioaccumulative potential | Not available. |
| Mobility in soil | No data available. |
| Other adverse effects | No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component. |

13. Disposal considerations

| | |
|---------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Disposal instructions | Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations. |
| Local disposal regulations | Dispose in accordance with all applicable regulations. |
| Hazardous waste code | The waste code should be assigned in discussion between the user, the producer and the waste disposal company. |
| Waste from residues / unused products | Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions). |
| 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. |

14. Transport information

| | |
|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| General | Not DOT regulated in domestic (USA ground) transportation in package sizes less than 3,992 lbs (407 gallons); 1,811 kg (1,514 liters). The DOT transportation information below is for shipments with package sizes equal to or exceeding this value. |
|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

DOT

Basic shipping requirements:

| | |
|-----------------------|--------------------------------------------------------------------------------------|
| UN number | UN3082 |
| Proper shipping name | Environmentally hazardous substances, liquid, n.o.s. (FERROUS SULFATE RQ = 3992 lbs) |
| Hazard class | 9 |
| Packing group | III |
| Environmental hazards | |
| Marine pollutant | Yes |
| Special precautions | Read safety instructions, SDS and emergency procedures before handling. |

Additional information:

| | |
|----------------------|----------------------------------|
| Special provisions | 8, 146, 335, 183, T 4, TP1, TP29 |
| Packaging exceptions | 155 |
| Packaging non bulk | 203 |
| Packaging bulk | 241 |

Notes

DOT Shipping Notes: 40 CFR 172.504(f)(9) For Class 9, a CLASS 9 placard is not required for domestic (USA ground) transportation, however shipments with packaging sizes exceeding the Reportable Quantity (RQ) or bulk packaging must be marked with the appropriate identification number on a CLASS 9 placard, an orange panel, or a white square-on-point display configuration as required. Since the Class 9 placard is not required (although it may be used) the hazardous material endorsement is also not required on a Commercial Drivers License.

IATA

Not regulated as dangerous goods.

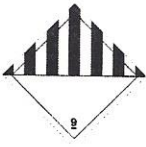
IMDG

Not regulated as dangerous goods.

General information

Not DOT regulated in domestic (USA ground) transportation in package sizes less than 3,992 lbs (407 gallons); 1,811 kg (1,514 liters). The DOT transportation information below is for shipments with package sizes equal to or exceeding this value.

DOT



Marine Pollutant



15. Regulatory information

US federal regulations This product is not known to be a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. 0)
Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)
FERROUS SULFATE (CAS 7782-63-0) Listed.

SARA 304 Emergency release notification
Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)
Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

Immediate Hazard - Yes

Delayed Hazard - No

Fire Hazard - No

Pressure Hazard - No

Reactivity Hazard - No

SARA 302 Extremely hazardous substance Not listed.

SARA 311/312 Hazardous chemical No

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List
Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)
Not regulated.

Safe Drinking Water Act (SDWA)
Not regulated.

US state regulations

US. Massachusetts RTK - Substance List
FERROUS SULFATE (CAS 7782-63-0)

US. New Jersey Worker and Community Right-to-Know Act
Not listed.

US. Pennsylvania Worker and Community Right-to-Know Law
FERROUS SULFATE (CAS 7782-63-0)

US. Rhode Island RTK
FERROUS SULFATE (CAS 7782-63-0)

US. California Proposition 65
WARNING: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

International Inventories

| <u>Country(s) or region</u> | <u>Inventory name</u> | <u>On Inventory</u> |
|-----------------------------|------------------------------------------------------------------------|---------------------|
| Australia | Australian Inventory of Chemical Substances (AICS) | yes |
| Canada | Domestic Substances List (DSI) | no |
| Canada | Non-Domestic Substances List (NDSI) | no |
| China | Inventory of Existing Chemical Substances in China (IECSC) | yes |
| Europe | European Inventory of Existing Commercial Chemical Substances (EINECS) | no |
| Europe | European list of Notified Chemical Substances (ELINCS) | no |
| Japan | Inventory of Existing and New Chemical Substances (ENCS) | no |
| Korea | Existing Chemicals list (ECI) | no |
| New Zealand | New Zealand Inventory | yes |
| Philippines | Philippine Inventory of Chemicals and Chemical Substances (PICCS) | yes |
| United States & Puerto Rico | Toxic Substances Control Act (TSCA) Inventory | no |

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date October 2015

Version # 1

Disclaimer

Southern Agricultural Insecticides, Inc. cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. While the information contained herein are presented in good faith and believed to be accurate, it is provided for your guidance only. Because many factors may affect processing or application, we recommend that you make tests to determine the suitability of a product for your particular purpose prior to use. No warranties of any kind, either expressed or implied, including warranties of merchantability or fitness for a particular purpose, are made regarding products described or information set forth, or that the products, or information may be used without infringing the intellectual property rights of others. In no case shall the information provided be considered a part of our terms and conditions of sale. Further, you expressly understand and agree that the information furnished by our company hereunder are given gratis and we assume no obligation or liability for the information given or results obtained, all such being given and accepted at your risk.