

| NFPA HAZARD RATING |          |   |              | U.S. TRANSPORT SUMMARY                        |  |
|--------------------|----------|---|--------------|---|--|
| 0                  | Least    |   |              | Not Regulated by U.S. DOT for ground shipment |  |
| 1                  | Slight   | 1 | Health       |   |  |
| 2                  | Moderate | 1 | Flammability |   |  |
| 3                  | High     | 0 | Reactivity   |   |  |
| 4                  | Severe   |   |              |   |  |

| SECTION 1: IDENTIFICATION  |   |
|--|---|
| <b>Product Name:</b>   | IRON LAIDEN® 0-0-1  |
| <b>Product ID/Unity #:</b>   |   |
| <b>Common Name:</b>  | Micronutrient fertilizer  |
| <b>Chemical Description:</b>   | Liquid fertilizer   |
| <b>Recommended Uses:</b>   | Agricultural micronutrient product. See product label for use information   |
| <b>Restrictions for Use:</b>   | See product label for information regarding restrictions on the use of this product.  |
| <b>Manufactured For:</b><br>WINFIELD SOLUTIONS, LLC<br>P. O. Box 64589<br>St. Paul, MN 55164-0589            | <b>MEDICAL EMERGENCY TELEPHONE NUMBER:</b> 1-877-424-7452 (24hrs)<br><br><b>Non-Emergency Business Inquiries:</b> 1-855-494-6343<br>Mon – Fri 8am – 5pm (Central Standard Time) |
| <b>FOR EMERGENCY, SPILL, LEAK, FIRE, EXPOSURE, OR ACCIDENT, CALL:<br/>CHEMTREC 1-800-424-9300 (24 hours)</b> |   |

| SECTION 2: HAZARDS IDENTIFICATION   |   |
|---|---|
| <b>POTENTIAL HEALTH EFFECTS:</b>  |   |
| <b>Skin Sensitivity:</b> Category 1B, May cause an allergic skin reaction   |   |
| <b>Carcinogenicity</b>  | NTP: Not listed      IARC: Not listed      OSHA: Not listed   |
| <b>OSHA HCS 2012 CLASSIFICATION:</b> This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)                                      |   |
| <b>SIGNAL WORD:</b> WARNING   |   |
| <b>HAZARD STATEMENTS:</b>   |   |
| H317- May cause an allergic skin reaction.  |   |
| P280- Wear protective gloves/protective clothing/eye protection/face protection.  |   |
| P361- Remove/Take off immediately all contaminated clothing.  |   |
| P302+P352- IF ON SKIN: Wash with plenty of soap and water.  |   |
| P333+P313- If skin irritation or rash occurs: Get medical advice/attention.   |   |
| P501- Dispose of contents/container according to local regulations.   |   |
| <b>Percent of product with unknown acute inhalation toxicity:</b> not determined, assessment of product was made on the basis of ownership of components of the mixture – Fe(III)HBED |   |
| <b>PRECAUTIONARY STATEMENTS:</b>  |   |
| <b>Prevention:</b>  | Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves/protective clothing/eye protection/face protection. Do NOT breathe mist, vapors or spray. Use only outdoors or in a well-ventilated area. Wash face, hands and any exposed skin thoroughly after handling. |
| <b>Response:</b>  | IF exposed or concerned: Get medical advice/attention. Remove/take off all contaminated clothing. Wash prior to reuse.  |



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IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, Get medical advice/attention.  
IF ON SKIN: Wash plenty of water and soap. If skin irritation occurs, get medical advice/attention. Take off contaminated clothing and wash it before reuse.  
IF INHALED: Remove person to fresh air and keep comfortable for breathing. Get medical attention if you feel unwell.

**Storage:** Store locked up. See Section 7 and the product label for further information.

**Disposal:** Dispose of contents/container to an approved waste disposal plant. See Section 13 and the product label for further information.

**Other:** May cause allergic reaction if in contact with skin.

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

| Ingredient   | % (wt) | CAS Reg. #   |
|--|--------|--------------|
| Fe(III)HBED; N,N'-di(2-hydroxybenzyl) ethylenediamine-N,N'-diacetic acid<br>iron (III) sodium salt   | >1%    | 1061328-86-6 |
|  |        |              |
| *Ingredients not specifically listed are non-hazardous and are considered to be confidential business information under 29 CFR 1910.1200(i). |        |              |
| See Section 8 for exposure limits.   |        |              |

## SECTION 4: FIRST AID MEASURES

|  |   |
|--|---|
| <b>General Advice:</b>   | If exposed or concerned, get medical advice/attention. Show this safety data sheet to the doctor in attendance.   |
| <b>Inhalation:</b>   | Remove to fresh air. If symptoms persist, call a physician. If breathing has stopped, give artificial respiration. Get medical attention immediately.   |
| <b>Eyes:</b>   | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses if present and easy to do. Continue rinsing. Keep eye wide open while rinsing. Do no rub affected area. Get medical attention if irritation develops and persists. |
| <b>Skin:</b>   | Rinse immediately with soap and plenty of water for at least 15 minutes. Remove contaminated clothing. Get medical attention if irritation develops and persists.   |
| <b>Ingestion:</b>  | Rinse mouth, give 2-3 glasses of water to drink. Seek medical attention. Induce vomiting. Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person.   |
| <b>Indication of any immediate medical attention and special treatment needed:</b> |   |
| <b>Note to physicians:</b>   | Treat symptomatically   |

## SECTION 5: FIRE FIGHTING MEASURES

**Suitable Extinguishing Media:** Depending on the materials stored, use the following extinguishing media: Foam, water spray, dry chemical powder, CO<sub>2</sub>  
**Unsuitable Extinguishing Media:** Unknown  
**Special Fire Fighting Procedures:** Wear NIOSH/MSHA approved self-contained breathing apparatus and full bunker gear. Dike area to prevent runoff and contamination of water sources. Do not allow fire-fighting water to enter surface ground water or ground water. Dispose of fire control water later. Avoid breathing vapors; keep upwind.  
**Hazardous Combustion Products:** Produces oxides of nitrogen on combustion: NyOx and also CO, CO<sub>2</sub>  
**Unusual Fire and Explosion Hazards:** Thermal decomposition can lead to release of irritating and toxic gases and vapors

## SECTION 6: ACCIDENTAL RELEASE MEASURES

**Personal Precautions:** Refer to Section 8 for personal protective equipment to be worn during containment and clean-up of a spill involving this product. Ensure adequate ventilation. Avoid contact with skin, eyes or clothing.  
**Environmental Precautions:** Do not let product enter drains. If the product enters drains or water, immediately inform appropriate authorities.

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**Methods for Containment:** Stop the leak. Collect into a suitable container using absorbent and pass for disposal. After removal, wash the spillage area with water. Prevent further leakage or spillage if safe to do so.  
**Methods for Clean-up:** Pick up and transfer to properly labeled containers.  
**Other Information:** Do not flush into public water courses. Do not empty into drains, ground or surface water and soil. If the product enters drains and water, immediately inform appropriate authorities.

## SECTION 7: HANDLING AND STORAGE

**Handling:** Avoid formation of mist/aerosol. Handle in accordance with good industrial hygiene and safety practice. Use personal protective equipment according to Section 8. Do not dispose to sewage system. Do not eat, drink or smoke when using this product. Remove contaminated clothing and shoes. Take off contaminated clothing and wash before reuse. Ensure adequate ventilation.

**Storage:** Keep in original, tightly closed container in a dry, cool place. Keep away from heat and sources of ignition.

**Minimum Storage Temperature:** Do not store below 40°F

**Other Precautions:** Consult Federal, state and local laws and regulations pertaining to storage.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

**Exposure Guidelines:** The following ingredients are the only ingredients of the product above the cut-off level (or level that contributes to the hazard classification of the mixture) which have an exposure limit applicable in the region for which this safety data sheet is intended or other recommended limit. At this time, the other relevant constituents have no known exposure limits from the sources listed here.

| Component: | OSHA PEL | ACGIH TLV | NIOSH REL |
|------------|----------|-----------|-----------|
| -          | -        | -         | -         |
| -          | -        | -         | -         |

**Respiratory Protection:**

**Engineering Controls:** Showers. Eyewash stations. Ventilation systems

**Protective Gloves:** Impervious gloves (recommended nitrile gloves, layer thickness .11mm and breakthrough time >480 minutes)

**Eye/Face Protection:** Tightly sealing safety goggles

**Skin and Body Protection:** Impervious clothing

**Respiratory Protection:** No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

**Work/Hygienic Practices:** Never eat, drink, nor use tobacco in work areas. Practice good hygiene after using this material, especially before eating, drinking, smoking, using the toilet, or applying cosmetics. Wear suitable gloves and eye/face protection.

Avoid contact with skin, eyes or clothing. Change contaminated clothing. Immediately remove spilled substance.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

|                                    |                 |   |                                  |
|------------------------------------|-----------------|---|----------------------------------|
| <b>Physical State:</b>             | Liquid          | <b>Specific Gravity (H<sub>2</sub>O=1):</b> | Not determined                   |
| <b>Vapor Pressure (mm Hg):</b>     | Not determined  | <b>Relative Density (lbs/gallon):</b>       | 11.68lbs/gal (1.4 g/mL @20.7° C) |
| <b>Vapor Density (Air=1):</b>      | Not determined  | <b>Melting Point/Freezing Point:</b>        | Not determined                   |
| <b>Solubility in Water (wt %):</b> | Soluble         | <b>Boiling Point/Range:</b>                 | Not determined                   |
| <b>Dynamic Viscosity:</b>          | Not determined  | <b>pH:</b>                                  | 9.0                              |
| <b>Appearance and odor:</b>        | Brown, odorless | <b>Flash Point:</b>                         | Not determined                   |

## SECTION 10: STABILITY AND REACTIVITY

**Reactivity:** Low chemical reactivity, Normal under normal use conditions

**Chemical Stability:** Stable under normal use and storage conditions

**Possibility of Hazardous Reactions:** No data available

**Conditions to Avoid:** Keep away from heat. In the event of a fire, produces oxides of nitrogen (NO<sub>x</sub>)

**Incompatible Materials:** None

**Hazardous Decomposition Products:** In the event of fire, produces oxides of nitrogen (NO<sub>x</sub>)

| <b>SECTION 11: TOXICOLOGICAL INFORMATION</b>   |   |   |        |       |
|--|---|---|--------|-------|
| <b>ACUTE TOXICITY</b> – This assessment was made based on components of the mixture: |   |   |        |       |
| Substance name:  | % w/w   | Method  | Result | Units |
| Fe(III) HBED   | 100   | LD50 (oral, rat, OECD 420/<br>Method B.1.Bis) | >2000  | mg/kg |
|  |   | LD50 (dermal, rate, OECD 402/<br>Method B.3)  | >2000  | mg/kg |
| <b>Eye Effects:</b>  | Based on components, not irritating (OECD 405/EU Method B.5)                                      |   |        |       |
| <b>Skin Effects:</b>   | Based on components, not irritating (OECD 404/EU Method B.4)                                      |   |        |       |
| <b>Acute Inhalation Effects:</b>   | Not determined.   |   |        |       |
| <b>Acute Oral Effects:</b>   | Not determined.   |   |        |       |
| <b>Specific Target Organ Toxicity:</b>   | Not determined  |   |        |       |
| <b>CHRONIC TOXICITY</b>  |   |   |        |       |
| <b>Chronic Effects:</b>  | Not determined  |   |        |       |
| <b>Carcinogenicity:</b>  | Classification based on data available for ingredients. Not carcinogenic.                         |   |        |       |
| <b>Germ cell Mutagenicity:</b>   | Not mutagenic (Bacterial Reverse Mutation Assay -Ames Test, according to OECS TG 471:<br>Negative |   |        |       |
| <b>Teratogenicity:</b>   | Not determined  |   |        |       |
| <b>STOT – Single exposure</b>  | Classification based on data available for ingredients. Not harmful                               |   |        |       |
| <b>STOT – repeated exposure</b>  | Classification based on data available for ingredients. Not harmful                               |   |        |       |
| <b>Target Organ effects</b>  | Not determined.   |   |        |       |
| <b>Reproductive Toxicity:</b>  | Classification based on data available for ingredients. Not harmful.                              |   |        |       |
| <b>POTENTIAL HEALTH EFFECTS:</b>   |   |   |        |       |
| <b>Skin Sensitivity:</b> Category 1B, May cause an allergic skin reaction            |   |   |        |       |

| <b>SECTION 12: ECOLOGICAL INFORMATION</b>  |   |                     |        |       |
|--|---|---------------------|--------|-------|
| <b>ENVIRONMENTAL SUMMARY:</b> There is no available eco-toxicological studies for the mixture as such. The assessment was made on the basis of ownership of components of the mixture – Fe(III)HBED. |   |                     |        |       |
| Substance:   | % w/w   | Method              | Result | Units |
| Fe(III)HBED  | 100   | LC50 (fish, 96h)    | >100   | mg/L  |
|  |   | EC50 (daphnia, 48h) | >100   | mg/L  |
| <b>ECOTOXICITY DATA:</b>   |   |                     |        |       |
| <b>Fish Acute and Prolonged Toxicity:</b>  | Not determined  |                     |        |       |
| <b>Aquatic Invertebrate Acute Toxicity:</b>  | Not determined  |                     |        |       |
| <b>Aquatic Plant Toxicity:</b>   | Not determined  |                     |        |       |
| <b>Bird Acute and Prolonged Toxicity:</b>  | Not determined  |                     |        |       |
| <b>Honeybee Toxicity:</b>  | Not determined  |                     |        |       |
| <b>ENVIRONMENTAL EFFECTS:</b>  |   |                     |        |       |
| <b>Soil Absorption/Mobility:</b>   | The logKoc value is less than the threshold value of 3, indicating no absorbing potential for this compound.  |                     |        |       |
| <b>Persistence and degradability:</b>  | Fe(III)HBED was investigated for its inherent biodegradation potential according to OECD 302B. The substance attained 8.2% degradation after 28 days and is therefore considered as not inherently biodegradable. Furthermore, the substance formed very stable complexes in an iron chelate interaction experiment. This is will be hydrolytically stable as well. |                     |        |       |
| <b>Bioaccumulative Potential:</b>  | The substance specific logPow was determined as -1.96 according to OECD Guideline 107. The threshold value is <= 4,5 so the substance has low potential for bioaccumulation.  |                     |        |       |
| <b>Other adverse effects:</b>  | Fe(III)HBED does not fulfill and of the relevant criteria for PBT or a vPvB-substance, respectively.  |                     |        |       |

**SECTION 13: DISPOSAL CONSIDERATIONS**

**Waste:** Dispose of in accordance with applicable Federal, state and local laws and regulations.  
**Container:** Do not reuse empty containers.  
**RCRA Characteristics:** It is the responsibility of the individual disposing of this product to determine the RCRA classification and hazard status of the waste.  
**California Hazardous Waste Status:** This product contains one or more substances that are listed with the State of California as a hazardous waste.

| Chemical Name | California Hazardous Waste Status |
|---------------|-----------------------------------|
| Not listed    |                                   |
|               |                                   |

**SECTION 14: TRANSPORT INFORMATION**

**DOT:** This product is not regulated by the U.S. Department of Transportation as a hazardous material for ground shipment.  
**(Ground)**  
**IMDG:** Not determined  
**(Sea)**  
**IATA:** Not determined  
**(Air)**  
**TDG:** Not determined  
**(Canada)**

**SECTION 15—REGULATORY INFORMATION**

**TSCA Inventory:** Contact supplier for inventory compliance status  
**SARA Title III Information:**  
**Section 302 - Extremely hazardous** None listed  
**substances:**  
**Section 311/312 - Hazard** Acute Health Hazard – Yes  
**Categories:**  
**Section 313** – The following chemicals are subject to the reporting requirements of Section 313 of Title III, Superfund Amendments and Reauthorization Act of 1986 and 40 CFR 372:  
 None listed

**CERCLA -** This product contains the following chemicals which have a reportable quantity (RQ) under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA):  
 None listed

**California Proposition 65:** This product contains the following Proposition 65 chemicals:

| Chemical Name | California Proposition 65 |
|---------------|---------------------------|
| None listed   |                           |
|               |                           |

**U.S. State Worker and Community Right-To-Know (RTK) Information (CT, IL, MA, MN, NH, NJ, PA, RI):**

| Chemical Name | CAS # | State(s) |
|---------------|-------|----------|
| None listed   |       |          |

**Canadian Domestic Substances List:** Not determined

| Chemical Name | CAS # |
|---------------|-------|
|               |       |

**WHMIS Classification:** Not determined

**Section 16—Other**

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**Revision Date:** May 8, 2023      **Supersedes document dated:** January 12, 2022

**Sections Revised:** Section 7 (minimum storage temperature)