# SAFETY DATA SHEET
## KEYLATE IRON

Revision: 08/09/2021
Supersedes Revision: 04/20/2021

## 1. Product and Company Identification

**Product Code:** Z-KEYFE

**Product Name:** KEYLATE IRON

**Company Name:** Stoller
9090 Katy Freeway
Suite 400
Houston, TX 77024

**Phone Number:** 1 (713)461-1493

**Web site address:** www.stollerusa.com

**Email address:** compliance@stollerusa.com

**Emergency Contact:** CHEMTREC, In the US and Canada call 1 (800)424-9300
CHEMTREC, From other countries call +1 (703)527-3887

**Information:** 1 (800)539-5283

**Intended Use:** For agricultural use only

**Synonyms:** Chelated micronutrient solution

## 2. Hazards Identification

**Acute Toxicity: Inhalation, Category 5**
**Serious Eye Damage/Eye Irritation, Category 2B**
**Acute Toxicity: Skin, Category 4**
**Acute Toxicity: Oral, Category 4**
**Corrosive To Metals, Category 1**

**GHS Signal Word:** **Warning**

**GHS Hazard Phrases:**
H290 - May be corrosive to metals.
H302 - Harmful if swallowed.
H312 - Harmful in contact with skin.
H320 - Causes eye irritation.
H333 - May be harmful if inhaled.

**GHS Precautionary Phrases:**
P234 - Keep only in original container.
P264 - Wash hands thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.

**GHS Response Phrases:**
P301+312 - IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P302+352 - IF ON SKIN: Wash with plenty of soap and water.
P305+351+338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312 - Call a POISON CENTER or doctor/physician if you feel unwell.
P321 - Specific treatment see ... on this label.
P330 - Rinse mouth.
P337+313 - If eye irritation persists, get medical advice/attention.
P362+364 - Take off contaminated clothing and wash it before reuse.
P390 - Absorb spillage to prevent material damage.

**GHS Storage and Disposal Phrases:**
P501 - Dispose of contents/container to appropriate waste facility.

**Potential Health Effects (Acute and Chronic):** Acute: Depending on the duration of contact, overexposure can irritate the eyes, skin, mucous membranes and any other exposed tissue.
Chronic: Not known. Expected toxicity hazard: slight.

**Inhalation:** Prolonged exposure to low concentrations of vapors may cause irritation to throat and upper respiratory tract, headache, nausea, dizziness, and even unconsciousness.

**Skin Contact:** May be harmful if absorbed through the skin. Prolonged and/or repeated contact may cause irritation and/or dermatitis.

**Eye Contact:** Contact with product may cause redness, slight to severe eye irritation.

**Ingestion:** Harmful if swallowed. May cause gastrointestinal irritation with nausea, vomiting and diarrhea. The toxicological properties of this substance have not been fully investigated.

## 3. Composition/Information on Ingredients

| CAS # | Components (Chemical Name) | Concentration | RTECS # |
|---|---|---|---|
| 7758-94-3 | Ferrous chloride | <10.0 % | NO5400000 |
| 17863-38-6 | ethanol, 2-amino-2-hydroxy-1,2,3-propanetricarboxylate | <20.0 % | NA |

## 4. First Aid Measures

**Emergency and First Aid Procedures:** Victims of severe exposure to chemicals must be taken to health providing centers for medical attention. Always bring with victim a copy of label and SDS of product to health professional.

**In Case of Inhalation:** Remove from exposure and move to fresh air immediately. If breathing is difficult, give oxygen. Get medical aid. Do NOT use mouth-to-mouth resuscitation. If breathing has ceased apply artificial respiration using oxygen and a suitable mechanical device such as a bag and a mask.

**In Case of Skin Contact:** Wipe off product and immediately wash affected area with abundant soap and water. Remove contaminated clothing taking care not to impregnate eyes. Seek medical attention if irritation occurs. Wash clothing before reuse.

**In Case of Eye Contact:** Hold eyelids apart and immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.

**In Case of Ingestion:** Immediately contact a physician or poison control center for treatment advice. Victim should drink milk, egg whites or large quantities of water and be induced to vomiting. Never give anything by mouth to someone who is unconscious, having convulsions or unable to swallow.

**Signs and Symptoms Of Exposure:** To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. Chronic manganese poisoning primarily involves the central nervous system. Early symptoms include languor, sleepiness and weakness in the legs. High incidence of pneumonia has been found in workers exposed to the dust or fume of some manganese compounds. The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

**Note to Physician:** Treat symptomatically and supportively.

## 5. Fire Fighting Measures

**Flash Pt:** N.A.

**Explosive Limits:** LEL: N.A. UEL: N.A.

**Autoignition Pt:** N.A.

**Suitable Extinguishing Media:** Use water spray, dry chemical, carbon dioxide, or alcohol-resistant foam. Substance is noncombustible; use agent most appropriate to extinguish surrounding fire.

**Fire Fighting Instructions:** As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear.

**Flammable Properties and Hazards:** Toxic fumes may be generated under fire conditions.

**Hazardous Combustion Products:** None known.

## 6. Accidental Release Measures

**Protective Precautions, Protective Equipment and Emergency Procedures:** In case of a large spill, protect people by clearing and isolating the affected area. Such releases should be responded to by trained personnel using pre-planned procedures. In the event of an incidental release, minimum Personal Protective Equipment must be worn: latex or rubber gloves and rubber boots, goggles or full face-shield and coveralls or long-sleeved shirt and pants.

**Environmental Precautions:** Do not allow to enter drains or waterways.

**Steps To Be Taken In Case Material Is Released Or Spilled:** It is necessary to contain the spill into the smallest area possible by diking, scooping, etc., and recover liquid into an appropriate container, labeling it accordingly. If product is clean, use it as intended, following original label directions; should it get contaminated, salvage for proper disposal as waste.
Absorb residual product onto dry carrier such as dirt, sand or any other absorbent material, then put in covered, labeled containers and dispose of as dry waste in accordance with Federal, State and Local waste disposal regulations.

## 7. Handling and Storage

**Precautions To Be Taken in Handling:** Use with adequate ventilation. Avoid breathing dust, mist, or vapor. Avoid contact with eyes, skin, or clothing. Avoid ingestion and inhalation. Empty containers may contain residual liquid or vapors and therefore should be handled the same as full containers.

**Precautions To Be Taken in Storing:** Inspect all incoming containers before storage to ensure all are properly labeled and not damaged. Keep containers tightly closed when not in use. Store in a cool, dry place, away from direct sunlight, sources of intense heat or where freezing is possible. Store away from food, feed, clothing materials and living quarters. Whenever possible, place chemicals on secondary containers or diked area. Store a maximum of three pails high; do not stack pallets. Store Keylate Micronutrients in fiberglass, polyethylene or polyolefin.

## 8. Exposure Controls/Personal Protection

| CAS # | Partial Chemical Name | OSHA TWA | ACGIH TWA | Other Limits |
|---|---|---|---|---|
| 7758-94-3 | Ferrous chloride | No data. | TLV: 1 mg/m³ as Fe | No data. |
| 17863-38-6 | ethanol, 2-amino-2-hydroxy-1,2,3-propanetricarboxylate | No data. | No data. | No data. |

| | |
|---|---|
| **Recommended Exposure Limits:** | No occupational exposure limits have been established for this mixture. |
| **Respiratory Equipment (Specify Type):** | A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant respirator use. If the respirator is the sole means of protection, use a full-face supplied air respirator. |
| **Eye Protection:** | Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166. |
| **Protective Gloves:** | Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.<br><br>Full contact: Minimum layer thickness: 0.11 mm Break through time: 480 min.<br><br>This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. |
| **Other Protective Clothing:** | Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place. Wear long sleeve shirt, long pants, and protective shoes with socks. |
| **Engineering Controls (Ventilation etc.):** | General ventilation is usually adequate. Local exhaust should be used if needed for safe, comfortable working conditions. An eye bath and washing facilities should be readily available. |
| **Work/Hygienic/Maintenance Practices:** | Handle in accordance with good industrial hygiene and safety practice. Users should wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove all dirty or contaminated clothing and wash it before reusing, as well as any other PPE. |
| **Environmental Exposure Controls:** | Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high-water mark. Do not contaminate water when disposing of equipment wash water. |

## 9. Physical and Chemical Properties

| | |
|---|---|
| **Physical States:** | [ ] Gas [ X ] Liquid [ ] Solid |
| **Appearance and Odor:** | Dark green color. Proprietary odor. |
| **pH:** | 8.0 - 10.0 at 20.0 C (68.0 F) |
| **Melting Point:** | N.A. |
| **Boiling Point:** | > 240.00 F (115.6 C) |
| **Flash Pt:** | N.A. |
| **Evaporation Rate:** | N.E. |
| **Flammability (solid, gas):** | Material will not burn. |
| **Explosive Limits:** | LEL: N.A. UEL: N.A. |
| **Vapor Pressure (vs. Air or mm Hg):** | N.E. |
| **Vapor Density (vs. Air = 1):** | N.E. |

| | |
|---|---|
| **Specific Gravity (Water = 1):** | 1.20 - 1.24 at 20.0 C (68.0 F) |
| **Density:** | ~ 10.1 LB/GA at 20.0 C (68.0 F) |
| **Solubility in Water:** | Soluble |
| **Saturated Vapor Concentration:** | N.E. |
| **Octanol/Water Partition Coefficient:** | N.E. |
| **Percent Volatile:** | N.A. |
| **Autoignition Pt:** | N.A. |
| **Decomposition Temperature:** | N.E. |
| **Viscosity:** | N.E. |

## 10. Stability and Reactivity

| | |
|---|---|
| **Reactivity:** | N.A. |
| **Stability:** | Unstable [ ] Stable [ X ] |
| **Conditions To Avoid - Instability:** | Stable under normal condition, but avoid extreme heat and contact with incompatible materials. |
| **Incompatibility - Materials To Avoid:** | Strong oxidizing agents. |
| **Hazardous Decomposition or Byproducts:** | Hazardous decomposition products formed under fire conditions. |
| **Possibility of Hazardous Reactions:** | Will occur [ ] Will not occur [ X ] |
| **Conditions To Avoid - Hazardous Reactions:** | None known. |

## 11. Toxicological Information

| | |
|---|---|
| **Toxicological Information:** | Mutagenicity: This product has not been investigated for mutagenic effects.<br>Embryotoxicity: This product has not been investigated for embryotoxic effects.<br>Teratogenicity: This product has not been investigated for teratogenic effects.<br>Reproductive Toxicity: This product has not been investigated for toxic reproductive effects.<br>CAS# 7758-94-3: Acute toxicity, LD50, Intraperitoneal, Mouse, 59.00 MG/KG. Result: Behavioral: Changes in psychophysiological tests. ; Naunyn-Schmiedeberg's Archiv fuer Experimentelle Pathologie und Pharmakologie., Vol/p/yr: 244,17, 1962 |
| **Irritation or Corrosion:** | No data available. |
| **Symptoms related to Toxicological Characteristics:** | No data available. |
| **Sensitization:** | The sensitizing properties of this product have not been thoroughly investigated. |
| **Chronic Toxicological Effects:** | The toxicological properties of this material have not been fully investigated. |
| **Carcinogenicity/Other Information:** | The carcinogenic properties of this product have not been thoroughly investigated. |
| **Carcinogenicity:** | NTP? No IARC Monographs? No OSHA Regulated? No |

## 12. Ecological Information

**General Ecological Information:** The available data on this material does not indicate any undue hazard to the environment under anticipated use and storage. All work practices must be aimed at eliminating environmental contamination. Any waste due to spillage or leakage should be contained and disposed of accordingly, see above under Section 6 "Accidental Release Measures." Due to its nutritional nature, may cause eutrophication if discharged in bodies of water. May be toxic to fish due to its copper component.

**Results of PBT and vPvB assessment:** No data available.

**Persistence and Degradability:** No data available.

**Bioaccumulative Potential:** No data available.

**Mobility in Soil:** No data available.

## 13. Disposal Considerations

**Waste Disposal Method:** This product, if unaltered by use, may be disposed of by treatment at a permitted facility or as advised by your local waste regulatory authority. Avoid contaminating water by disposal of equipment wash waters or other product wastes.
Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

## 14. Transport Information

**LAND TRANSPORT (US DOT):**

**DOT Proper Shipping Name:** CORROSIVE LIQUID, N.O.S. (Contains ferrous chloride)
**DOT Hazard Class:** 8 CORROSIVE
**UN/NA Number:** 1760 **Packing Group:** II


**MARINE TRANSPORT (IMDG/IMO):**

**IMDG/IMO Shipping Name:** CORROSIVE LIQUID, N.O.S. (Contains ferrous chloride)
**UN Number:** 1760 **Packing Group:** II
**Hazard Class:** 8 - CORROSIVE
**IMDG MFAG Number:**
**IMDG EMS Page:** **Marine Pollutant:** No

**AIR TRANSPORT (ICAO/IATA):**

**ICAO/IATA Shipping Name:** Corrosive liquid, N.O.S. (Contains ferrous chloride)
**UN Number:** 1760 **Packing Group:** II
**Hazard Class:** 8 - CORROSIVE

## 15. Regulatory Information

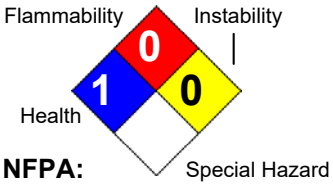
**Regulatory Information:** TSCA Inventory: In compliance with inventory requirements for commercial purposes.

## 16. Other Information

**Revision Date:** 08/09/2021

**Previous revision:** 04/20/2021

**Hazard Rating System:**




**NFPA:**

**Additional Information About This Product:** No data available.

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