

# SAFETY DATA SHEET

## KEYLATE MANGANESE

### 1. Product and Company Identification

**Product Code:** Z-KEYMN  
**Product Name:** KEYLATE MANGANESE  
**Trade Name:** KEYLATE MANGANESE  
**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**  
**Acute Toxicity: Oral, Category 4**  
**Serious Eye Damage/Eye Irritation, Category 2B**  
**Acute Toxicity: Skin, Category 5**



**GHS Signal Word:** **Warning**  
**GHS Hazard Phrases:** H302 - Harmful if swallowed.  
H313 - May be harmful in contact with skin.  
H320 - Causes eye irritation.  
H333 - May be harmful if inhaled.  
**GHS Precautionary Phrases:** P264 - Wash hands thoroughly after handling.  
P270 - Do not eat, drink or smoke when using this product.  
**GHS Response Phrases:** P301+312 - IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.  
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.  
P330 - Rinse mouth.  
P337+313 - If eye irritation persists, get medical advice/attention.  
**GHS Storage and Disposal Phrases:** P501 - Dispose of contents/container to permitted 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: 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

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diarrhea. The toxicological properties of this substance have not been fully investigated.

### 3. Composition/Information on Ingredients

CAS #	Components (Chemical Name)	Concentration	RTECS #
1344-43-0	Manganese oxide	<10.0 %	OP0900000
17863-38-6	ethanol, 2-amino-2-hydroxy-1,2,3-propanetricarboxylate	<15.0 %	NA

### 4. First Aid Measures

<b>Emergency and First Aid Procedures:</b>	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.
<b>In Case of Inhalation:</b>	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.
<b>In Case of Skin Contact:</b>	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.
<b>In Case of Eye Contact:</b>	Hold eyelids apart and immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.
<b>In Case of Ingestion:</b>	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.
<b>Note to Physician:</b>	Treat symptomatically and supportively.

### 5. Fire Fighting Measures

<b>Flash Pt:</b>	N.A.
<b>Explosive Limits:</b>	LEL: N.A. UEL: N.A.
<b>Autoignition Pt:</b>	N.A.
<b>Suitable Extinguishing Media:</b>	Use water spray, dry chemical, carbon dioxide, or alcohol-resistant foam. Substance is noncombustible; use agent most appropriate to extinguish surrounding fire.
<b>Unsuitable Extinguishing Media:</b>	None known.
<b>Fire Fighting Instructions:</b>	As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear.
<b>Flammable Properties and Hazards:</b>	Toxic fumes under fire conditions.
<b>Hazardous Combustion Products:</b>	None known.

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### 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
1344-43-0	Manganese oxide	CEIL: 5 mg/m <sup>3</sup>	TLV: 5 mg/m <sup>3</sup> as Mn	No data.
17863-38-6	ethanol, 2-amino-2-hydroxy-1,2,3-propanetricar boxylate	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.

**Other Protective Clothing:**

Long-sleeved shirt, long pants and protective shoes should be worn as a good safety practice. 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

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<b>Engineering Controls (Ventilation etc.):</b>	pants, and protective shoes with socks. 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.
<b>Work/Hygienic/Maintenance Practices:</b>	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.
<b>Environmental Exposure Controls:</b>	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

<b>Physical States:</b>	[ ] Gas [ X ] Liquid [ ] Solid
<b>Appearance and Odor:</b>	Clear, brown color. Pleasant, characteristic odor.
<b>pH:</b>	9.1 - 11.1
<b>Freezing Point:</b>	N.E.
<b>Boiling Point:</b>	NR
<b>Flash Pt:</b>	N.A.
<b>Evaporation Rate:</b>	N.E.
<b>Flammability (solid, gas):</b>	Material will not burn.
<b>Explosive Limits:</b>	LEL: N.A. UEL: N.A.
<b>Vapor Pressure (vs. Air or mm Hg):</b>	N.E.
<b>Vapor Density (vs. Air = 1):</b>	N.E.
<b>Specific Gravity (Water = 1):</b>	1.17 - 1.21
<b>Density:</b>	~ 9.9 LB/GA
<b>Solubility in Water:</b>	Soluble
<b>Saturated Vapor Concentration:</b>	N.E.
<b>Octanol/Water Partition Coefficient:</b>	N.E.
<b>Percent Volatile:</b>	N.A.
<b>Autoignition Pt:</b>	N.A.
<b>Decomposition Temperature:</b>	N.E.
<b>Viscosity:</b>	N.E.

### 10. Stability and Reactivity

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

**Hazardous Reactions:**

**11. Toxicological Information**

<b>Toxicological Information:</b>	Mutagenicity: This product has not been investigated for mutagenic effects. Embryotoxicity: This product has not been investigated for embryotoxic effects. Teratogenicity: This product has not been investigated for teratogenic effects. Reproductive Toxicity: This product has not been investigated for toxic reproductive effects. CAS# 1344-43-0: Acute toxicity, LD50, Subcutaneous, Mouse, 1.000 GM/KG. Result: Kidney, Ureter, Bladder:Urine volume increased. Kidney, Ureter, Bladder:Other changes in urine composition. Nutritional and Gross Metabolic: Changes in: Sodium. ; Zhurnal Vsesoyuznogo Khimicheskogo Obshestva im. D.I. Mendeleeva. Journal of the D.I. Mendeleeva All-Union Chemical Society., V/O Mezhdunarodnaya Kniga, 113095, Moscow USSR, Vol/p/yr: 19,186, 1974
<b>Irritation or Corrosion:</b>	No data available.
<b>Symptoms related to Toxicological Characteristics:</b>	No data available.
<b>Sensitization:</b>	The sensitizing properties of this product have not been thoroughly investigated.
<b>Chronic Toxicological Effects:</b>	The toxicological properties of this material have not been fully investigated.
<b>Carcinogenicity/Other Information:</b>	The carcinogenic properties of this product have not been thoroughly investigated. The components of this product are not listed as a carcinogenic by CPDB, IARC, NTP, OSHA, CAL/OSHA and ACGIH.
<b>Carcinogenicity:</b>	NTP? No      IARC Monographs? No      OSHA Regulated? No

**12. Ecological Information**

<b>General Ecological Information:</b>	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.
<b>Results of PBT and vPvB assessment:</b>	No data available.
<b>Persistence and Degradability:</b>	No data available.
<b>Bioaccumulative Potential:</b>	No data available.
<b>Mobility in Soil:</b>	No data available.

**13. Disposal Considerations**

<b>Waste Disposal Method:</b>	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.
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**14. Transport Information**

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Supersedes Revision: 03/24/2016**LAND TRANSPORT (US DOT):****DOT Proper Shipping Name:** Not Regulated. Trade Name: KEYLATE MANGANESE**DOT Hazard Class:****UN/NA Number:****MARINE TRANSPORT (IMDG/IMO):****IMDG/IMO Shipping Name:** Not Regulated. Trade Name: KEYLATE MANGANESE**UN Number:****Packing Group:****Hazard Class:****IMDG MFAG Number:** N/A**IMDG EMS Page:****AIR TRANSPORT (ICAO/IATA):****ICAO/IATA Shipping Name:** Not Regulated. Trade Name: KEYLATE MANGANESE**UN Number:****Packing Group:****Hazard Class:****Additional Transport Information:** Placards / Markings: N.A.

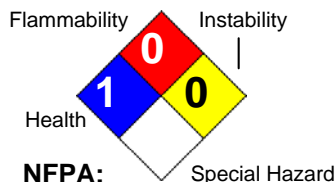
Emergency Response Guide Number: N.A.

Reportable Quantity: N.A.

### 15. Regulatory Information

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

### 16. Other Information

**Revision Date:** 01/31/2019**Hazard Rating System:****Additional Information About This Product:** No data available.**Company Policy or Disclaimer:**

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