



# SAFETY DATA SHEET

## Chemurgic's Manganese 7 Ligno +

### 1. Identification

#### 1.1. Product identifier

**Product Identity** Chemurgic's Manganese 7 Ligno +  
**Alternate Names** Common Name: Fertilizing compound, liquid.  
Chemical Description: Manganese lignosulfonate complex, aqueous solution

#### 1.2. Relevant identified uses of the substance or mixture and uses advised against

**Intended use** See Technical Data Sheet.  
**Application Method** See Technical Data Sheet.

#### 1.3. Details of the supplier of the safety data sheet

**Company Name** Chemurgic Agricultural Chemicals, Inc.  
P.O. Box 2106  
Turlock, CA 95381

#### EMERGENCY PHONE NUMBERS

**Company Phone Number** DAYS: (209) 634-2951  
EVES: (209) 652-7260  
**24-Hour Emergency Telephone Number** INFOTRAC: 1-800-535-5053  
EPA National Response Center: (800) 424-8802

### 2. Hazard(s) identification

#### 2.1. Classification of the substance or mixture

Acute Toxicity (Oral)	Category 5; H303
Acute Toxicity (Inhalation)	Category 4; H332
Skin Corrosion/Irritation	Category 3; H316
Eye Irritation	Category 2B; H320

#### 2.2. Label elements

Using the Toxicity Data listed in section 11 and 12 the product is labeled as follows.



**Warning**

#### HAZARD STATEMENTS:

H303: May be harmful if swallowed.  
H332: Harmful if inhaled.  
H316: Causes mild skin irritation.  
H320: Causes eye irritation.

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### [Prevention]:

P261: Avoid breathing vapors.

P264: Wash hands, face, and other affected areas thoroughly after handling.

P271: Use only outdoors or in a well-ventilated area.

### [Response]:

P312: 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.

P332+313: If skin irritation occurs: Get medical advice / attention.

P337+313: If eye irritation persists: Get medical advice / attention.

P304+P340: If inhaled: Remove person to fresh air and keep comfortable for breathing.

[Storage]: No GHS storage statements

[Disposal]: No GHS disposal statements

### [Sensitization]:

Not a skin sensitizer.

### [Comments Health]:

Read all precautions of product being handled and follow the most restrictive language for all products to provide the safest work environment.

### [Comments]:

**KEEP OUT OF REACH OF CHILDREN**

## 3. Composition/information on ingredients

This product contains the following substances that present a hazard within the meaning of the relevant State and Federal Hazardous Substances regulations.

Common Chemical Name	CAS No.	%
Manganese sulfate	10034-96-5	1.0 – 10

## 4. First aid measures

### 4.1. Description of first aid measures

**General** In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person.

**Inhalation** Remove person to fresh air and keep comfortable for breathing. If breathing is irregular or stopped, give artificial respiration. If unconscious place in the recovery position and obtain immediate medical attention. Call a Poison Control Center or doctor if you feel unwell.

**Eyes** Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical attention.

**Skin** Remove contaminated clothing. Wash skin thoroughly with soap and water. If skin irritation occurs, get medical attention.

**Ingestion** Rinse mouth. Get medical attention if symptoms occur.

### 4.2. Most important symptoms and effects, both acute and delayed

Direct contact with eyes may cause temporary irritation. May cause redness.

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**5. Fire-fighting measures**

**5.1. Extinguishing media**

Water fog, foam, dry chemical powder, carbon dioxide (CO<sub>2</sub>). Do not use water jet as an extinguisher as this will spread the fire.

**5.2. Special hazards arising from the substance or mixture**

Hazardous decomposition: Thermal degradation at high temperatures above 575° C (1067° F) may produce sulfur trioxide.

**5.3. Advice for fire-fighters**

Wear positive pressure, self-contained breathing apparatus and goggles. Contain any liquid runoff.

**Unusual Fire and Explosion Hazards:** None known.

**6. Accidental release measures**

**6.1. Personal precautions, protective equipment and emergency procedures**

Put on appropriate personal protective equipment (see section 8). Avoid inhalation of vapors and spray mist. Ensure adequate ventilation. Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.

**6.2. Environmental precautions**

Do not allow spills to enter drains or waterways.

Prevent product spillage from entering drinking water supplies or streams.

**6.3. Methods and material for containment and cleaning up**

Collect liquid or absorb onto absorbent material and package for disposal. After removal of spilled product, flush contaminated area thoroughly with water. Do not return spills to original containers for re-use.

**7. Handling and storage**

**7.1. Precautions for safe handling**

Transfer products using chemical-resistant plastic or stainless steel tanks, pumps, valves, etc. Wear the appropriate personal protective equipment when handling this product. Avoid contact with eyes, skin and clothing. Avoid inhalation of spray mists. Ensure adequate ventilation. Wash hands thoroughly with water after handling. Do not eat, drink, or smoke when using this product.

See section 2 for further details. - [Prevention]:

**7.2. Conditions for safe storage, including any incompatibilities**

Handle containers carefully to prevent damage and spillage.

Incompatible materials: Contact with brass or strong oxidizing agents.

Store in plastic or stainless steel container in a cool, well-ventilated, dry place at temperatures above 40° F. Keep container tightly closed. Do not store in contact with brass. Do not store near food or feeds. Do not stack pallets more than two high. Keep out of reach of children.

See section 2 for further details. - [Storage]:

**7.3. Specific end use(s)**

No data available.

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### 8. Exposure controls and personal protection

#### 8.1. Control parameters

##### Occupational Exposure limits

##### US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
Manganese Sulfate (CAS 10034-96-5)	Ceiling	5 mg/m3

##### US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Manganese Sulfate (CAS 10034-96-5)	TWA	0.1 mg/m3 0.02 mg/m3	Inhalable fraction. Respirable fraction.

##### US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value	Form
Manganese Sulfate (CAS 10034-96-5)	STEL TWA	3 mg/m3 1 mg/m3	Fume. Fume.

#### 8.2. Exposure controls

<b>Respiratory</b>	If workers are exposed to concentrations above the exposure limit they must use the appropriate, certified respirators.
<b>Eyes</b>	Chemical dust/splash goggles or full-face shield to prevent eye contact. As a general rule, do not wear contact lenses when handling.
<b>Skin</b>	Impervious gloves and clothes.
<b>Engineering Controls</b>	Provide adequate ventilation. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates and any vapor below occupational exposure limits suitable respiratory protection must be worn.
<b>Other Work Practices</b>	Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.

See section 2 for further details. - [Prevention]:

### 9. Physical and chemical properties

<b>Appearance</b>	Dark Brown Liquid
<b>Odor</b>	Lignin
<b>Odor threshold</b>	Not available
<b>pH</b>	5.5
<b>Melting point / freezing point</b>	1292° F (700° C) estimated / 15-25° F (-9.44- -3.89° C) estimated
<b>Initial boiling point and boiling range</b>	100° C (212° F) estimated
<b>Flash Point</b>	>200° F (ASTM D-56)
<b>Evaporation rate (Ether = 1)</b>	Same as water
<b>Flammability (solid, gas)</b>	Noncombustible
<b>Upper/lower flammability or explosive limits</b>	<b>Lower Explosive Limit:</b> Not available <b>Upper Explosive Limit:</b> Not available
<b>Vapor pressure (Pa)</b>	760 mmHg
<b>Vapor Density</b>	< 1.0

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Relative Density	1.24 – 1.29 g/cm <sup>3</sup>
Specific Gravity	1.28
Solubility in Water	Completely miscible
Partition coefficient n-octanol/water (Log Kow)	Not available
Auto-ignition temperature	Not available
Decomposition temperature	Not available
Viscosity (cSt)	Not available
Density	10.7 lbs/gal

### 9.2. Other information

No other relevant information.

## 10. Stability and reactivity

### 10.1. Reactivity

Stable and non-reactive under normal conditions of use, storage and transport.

### 10.2. Chemical stability

Stable under normal circumstances.

### 10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

### 10.4. Conditions to avoid

Avoid contact with incompatible materials.

### 10.5. Incompatible materials

Contact with brass or strong oxidizing agents.

### 10.6. Hazardous decomposition products

Thermal degradation at high temperatures above 575° C (1067° F) may produce sulfur trioxide.

## 11. Toxicological information

### Acute toxicity

Ingredient	Oral LD50, mg/kg	Skin LD50, mg/kg	Inhalation LC50, mg/L/4hr
Manganese sulfate (CAS No. 10034-96-5)	2150 mg/kg (Rat)	No data available	>4.45 mg/l (Rat)

Note: When no route specific LD50 data is available for an acute toxin, the converted acute toxicity point estimate was used in the calculation of the product's ATE (Acute Toxicity Estimate).

Classification	Category	Hazard Description
Acute toxicity (oral)	5	May be harmful if swallowed.
Acute toxicity (dermal)	---	Not applicable.
Acute toxicity (inhalation)	4	Harmful if inhaled.
Skin corrosion/irritation	3	Causes mild skin irritation.
Serious eye damage/irritation	2B	Causes eye irritation.

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Respiratory sensitization	---	Not Applicable
Skin sensitization	---	Not a contact sensitizer.
Germ cell mutagenicity	---	No data available to indicate product or any compounds present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity	---	Not considered a carcinogen by IARC, ACGIH, NTP, or OSHA.
Reproductive toxicity	---	Not expected to cause reproductive or developmental effects.
STOT-single exposure	---	Not classified.
STOT-repeated exposure	---	Not classified.
Aspiration hazard	---	Not available.
Chronic effects	---	Prolonged inhalation may be harmful.
<b>Information on likely routes of exposure</b>	Inhalation:	Harmful if inhaled
	Skin contact:	Mild irritant, especially from prolonged exposure. May cause redness.
	Eye contact:	Mild irritant. May cause redness.
	Ingestion:	May cause stomach cramps and/or nausea.

## 12. Ecological information

### 12.1. Toxicity

Harmful to aquatic life with long lasting effects.

#### Aquatic Ecotoxicity

Ingredient	96 hr LC50 fish, mg/l	48 hr EC50 crustacea, mg/l	ErC50 algae, mg/l
Chemurgic's Manganese 7 Ligno + (CAS Mixture)	2350 mg/l Species: Fish	5700 mg/l Species: Daphnia	Not available
Manganese Sulfate - (10034-96-5)	24.3-38.9 mg/l Species: Fathead minnow ( <i>Pimephales promelas</i> )	7.09-9.36 mg/l Species: Water flea ( <i>Daphnia magna</i> )	Not Available

**12.2. Persistence and degradability:** No data is available.

**12.3. Bioaccumulative potential:** Not available.

**12.4. Mobility in soil:** No data available.

**12.5. Other adverse effects:** No other adverse environmental effects are expected from this component.

## 13. Disposal considerations

### 13.1. Waste treatment methods

Observe all federal, state and local regulations when disposing of this substance.

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**14. Transport information**

**DOT CLASSIFICATION:** Not regulated as dangerous goods.

**15. Regulatory information**

**Regulatory Overview**

The regulatory data in Section 15 is not intended to be all-inclusive, only selected regulations are represented.

**Toxic Substance Control Act ( TSCA)**

All components of this material are either listed or exempt from listing on the TSCA Inventory.

**CERCLA Hazardous Substance List**

Manganese Sulfate (CAS No. 10034-96-5) – Listed.

**SARA 304 Emergency Release Notification**

Not regulated.

**OSHA Specifically Regulated Substances**

Not listed.

**SARA Title III Classification**

Section 302 – Extremely hazardous substance: Not listed.  
Section 311/312 – Hazardous chemical: No.  
Section 313: Manganese Sulfate (CAS # 10034-96-5)

**US EPA Tier II Hazards**

**Fire:** No

**Sudden Release of Pressure:** No

**Reactive:** No

**Immediate (Acute):** Yes

**Delayed (Chronic):** No

**California Proposition 65:** This product does not contain any chemicals known to the state of California to cause cancer and/or reproductive harm.

**State Right to Know:** Manganese Sulfate (CAS # 10034-96-5) – NJ, RI

**16. Other information**

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to our products. Customers/users of this product must comply with all applicable health and safety laws, regulations, and orders.

**This is the first version in the GHS SDS format. Listings of changes from previous versions in other formats are not applicable.**

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