

FOR CHEMICAL EMERGENCY, SPILL, LEAK, FIRE, EXPOSURE OR ACCIDENT, CALL CHEMTREC - DAY OR NIGHT 1-800-424-9300

## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

### FORMULATED FOR:

LOVELAND PRODUCTS, INC.  
P.O. Box 1286 • Greeley, CO 80632-1286

**24-Hour Emergency Phone:** 1-800-424-9300

**Medical Emergencies:** 1-866-944-8565

**U.S. Coast Guard National Response Center:** 1-800-424-8802

**PRODUCT NAME:** LIGNO-BASE 410 8-0-0

**CHEMICAL NAME:** Inorganic/Organic Chemical Fertilizer Solution

**CHEMICAL FAMILY:** Aqueous Plant Nutritional Solution

**MSDS Number:** 1000370706-13-LPI **MSDS Revisions:** New

**Date of Issue:** 06/05/13

**Supersedes:** New

## 2. HAZARDS IDENTIFICATION SUMMARY

**KEEP OUT OF REACH OF CHILDREN - CAUTION** – May cause mild eye and skin irritation. Avoid contact with skin, eyes, open cuts, or sores. In case of contact, flush with water. Get medical attention for eyes. This blended liquid fertilizer is derived from Urea, Ferrous Sulfate, Manganese Sulfate, and Zinc Sulfate; also contains sulfonic acids of Lignosulfonates. Nausea and vomiting could be expected upon large dose ingestion. The acute ingestive effects are described as nausea, chills, and diarrhea. Eye or skin contact with these products could cause irritation (particularly in sensitive persons), and respiratory irritation could be expected from the unprotected inhalation of fertilizer mists. Product users should avoid prolonged or repeated skin contact by wearing impervious gloves, long sleeve shirt, long pants, socks and rubber boots. Goggles for eye protection are recommended. Wash thoroughly after handling and using this product.

This product is a dark brown liquid with slight lignin odor.

## 3. COMPOSITION, INFORMATION ON INGREDIENTS

<u>Chemical Ingredients:</u>	<u>Percentage by Weight:</u>	<u>CAS No.</u>	<u>TLV (Units)</u>
Total Nitrogen (N) (from Urea)	8.00	57-13-6	not listed
Sulfur (S) (from Ferrous Sulfate, Manganese Sulfate, and Zinc Sulfate)	4.60	7720-78-7; 7785-87-7; 7733-02-0	not listed
Iron (Fe) (from Ferrous Sulfate)	2.40	7720-78-7	not listed
Manganese (Mn) (from Manganese Sulfate)	2.40	7785-87-7	not listed
Zinc (Zn) (from Zinc Sulfate)	4.40	7733-02-0	not listed
Fertilizer salts and inert ingredients	78.20		

## 4. FIRST AID MEASURES

<b>If in eyes:</b>	Hold eye open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.
<b>If on skin or clothing:</b>	Take off contaminated clothing. Rinse skin immediately with plenty of water for 15 to 20 minutes. Call a poison control center or doctor for treatment advice.
<b>If swallowed:</b>	Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to an unconscious person.
<b>If inhaled:</b>	Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.

FOR A MEDICAL EMERGENCY INVOLVING THIS PRODUCT CALL: **1-866-944-8565**.

## 5. FIRE FIGHTING MEASURES

<b>FLASH POINT (°F/Test Method):</b>	Does not flash.
<b>FLAMMABLE LIMITS (LFL &amp; UFL):</b>	Not applicable.
<b>EXTINGUISHING MEDIA:</b>	Use media appropriate for surrounding fire.
<b>HAZARDOUS COMBUSTION PRODUCTS:</b>	None known.
<b>SPECIAL FIRE FIGHTING PROCEDURES:</b>	Wear self-contained breathing apparatus and full protective gear. If heated to dryness, immediately ventilate the structure to prevent pressure build-up, which will increase the possibility of explosion.
<b>UNUSUAL FIRE AND EXPLOSION HAZARDS:</b>	Product may burn if all water has evaporated or boiled away.

**6. ACCIDENTAL RELEASE MEASURES****STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:**

Wear appropriate personal protective equipment (refer to Section 8). Pick up the material with absorbent material and place in a container for proper disposal in accordance with local, state and federal regulations.

**ENVIRONMENTAL PRECAUTIONS:** Keep spills and cleaning runoff out of municipal sewers and open bodies of water.

**7. HANDLING AND STORAGE**

**HANDLING:** Wear protective eyewear and chemical resistant gloves. Wash thoroughly with soap and water after handling.  
**STORAGE:** Store in a cool, dry place. Store in original container. Keep tightly closed. Do not reuse empty container. Do not contaminate water, food or feed by storage or disposal.

**8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

**ENGINEERING CONTROLS:** Work in well-ventilated area. Local exhaust may be required if working in confined space.  
**RESPIRATORY PROTECTION:** Wear a NIOSH approved air-purifying respirator for pesticide handling if necessary.  
**EYE PROTECTION:** Chemical goggles or face-shield.  
**SKIN PROTECTION:** Wear long sleeved shirt, long pants, shoes and socks.

**OSHA PEL 8 hr TWA**  
not listed

**ACGIH TLV-TWA**  
not listed

**9. PHYSICAL AND CHEMICAL PROPERTIES**

**APPEARANCE AND ODOR:** Dark brown liquid with slight lignin odor. **SOLUBILITY:** Soluble  
**SPECIFIC GRAVITY (Water = 1):** 1.366 g/ml **BULK DENSITY:** 11.40 lbs/gal. **pH:** Not established  
**VAPOR PRESSURE:** Not established **BOILING POINT:** Not established  
**PERCENT VOLATILE (by volume):** Not established **EVAPORATION RATE:** Not established  
**Note:** These physical data are typical values based on material tested but may vary from sample to sample.  
 Typical values should not be construed as a guaranteed analysis of any specific lot or as specification items.

**10. STABILITY AND REACTIVITY**

**STABILITY:** Stable  
**CONDITIONS TO AVOID:** Extreme temperatures, flame, and exposure to incompatible materials.  
**INCOMPATIBILITY:** Avoid contact with brass or strong oxidizing agents.  
**HAZARDOUS DECOMPOSITION PRODUCTS:** Carbon and nitrogen oxides.  
**HAZARDOUS POLYMERIZATION:** Will not occur.

**11. TOXICOLOGICAL INFORMATION**

**Acute Oral LD<sub>50</sub> (rat):** >5000 mg/kg **Acute Dermal LD<sub>50</sub> (rabbit):** >2000 mg/kg  
**Eye Irritation (rabbit):** May irritate eyes **Skin Irritation (rabbit):** May irritate skin  
**Inhalation LC<sub>50</sub> (rat):** Not established. **Skin Sensitization:** Not a sensitizer.  
**Carcinogenic Potential:** Not listed by OSHA, NTP, IARC, and ACGIH as a known human carcinogen

**12. ECOLOGICAL INFORMATION**

Do not contaminate water supplies.

**13. DISPOSAL CONSIDERATIONS**

Do not reuse product containers. Triple rinse (or equivalent), and add rinsate to spray tank, then offer for recycling at an ACRC site (go to <http://www.acrecycle.org/> for locations) or by reconditioning, or puncture and dispose of in a sanitary landfill or by other procedures approved by state and local authorities. Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility. Do not contaminate water sources by runoff from cleaning of equipment, disposal of equipment wash waters or spray waste.

**14. TRANSPORT INFORMATION**

**DOT Shipping Description:** NOT REGULATED BY USDOT.

**Freight Classification:** FERTILIZING COMPOUNDS (MANUFACTURED FERTILIZERS), NOI; LIQUID (NMFC 68140, SUB 6; CLASS 70)

**15. REGULATORY INFORMATION****NFPA & HMIS Hazard Ratings:**

## NFPA

1 Health  
0 Flammability  
0 Instability

0 Least  
1 Slight  
2 Moderate  
3 High  
4 Severe

## HMIS

1 Health  
0 Flammability  
0 Reactivity  
B PPE

**SARA Hazard Notification/Reporting**

**SARA Title III Hazard Category:** Immediate Y Fire N Sudden Release of Pressure N  
Delayed N Reactive N

**Reportable Quantity (RQ) under U.S. CERCLA:** Ferrous Sulfate (CAS: 7720-78-7) 1,000 lbs.; Zinc Sulfate (CAS: 7733-02-0) 1,000 lbs.

**SARA, Title III, Section 313:** Zinc Compounds; Manganese Compounds

**RCRA Waste Code:** Not listed

**CA Proposition 65: WARNING:** This product contains chemicals known to the State of California to cause cancer or birth defects or other reproductive harm.

**16. OTHER INFORMATION**

**MSDS STATUS:** New

**PREPARED BY:** Registrations and Regulatory Affairs

**REVIEWED BY:** Environmental Health and Safety

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