

**IN CASE OF EMERGENCY DUE TO A MAJOR SPILL, FIRE OR POISONING INVOLVING THIS PRODUCT CALL DAY OR NIGHT, 1-800-561-8273 or CHEMTREC 1-800-424-9300**

**1. CHEMICAL PRODUCT AND COMPANY INFORMATION**

**DISTRIBUTED BY:**

LOVELAND PRODUCTS CANADA, INC.  
789 Donnybrook Drive • Dorchester, Ontario N0L 1G5

**24-Hour Emergency Phone:** 1-800-561-8273  
**Additional Emergency Phone (Canutec):** 1-613-996-6666 (Collect)

**CHEMICAL IDENTITY:** Lignosulfonic acid, zinc salt  
**PRODUCT USE:** Chelated micronutrient solution  
**REG. NO.:** 2005054B – Fertilizers Act  
**MSDS Number:** 2005054B-12-LPI      **MSDS Revisions:** Sections 1, 4      **Date of Issue:** 09/18/12      **Supersedes:** 05/23/11

**2. HAZARDS IDENTIFICATION SUMMARY**

**KEEP OUT OF REACH OF CHILDREN – CAUTION -** Harmful if swallowed, inhaled or absorbed through skin. May cause eye and skin irritation. Avoid contact with eyes, skin and clothing. Avoid breathing vapours and mists. Use with adequate ventilation. Eye protection and gloves are suggested when handling undiluted product. Wash thoroughly after handling. Contents may be under pressure. Use caution when opening. This liquid micronutrient chelate solution is derived from Urea and Zinc Sulfate, and is complexed with lignosulfonic acid.

This product is a light brown-coloured solution with charred wood odour. Primary routes of entry are eye contact and skin contact.

**3. COMPOSITION, INFORMATION ON INGREDIENTS**

<u>Chemical Ingredients:</u>	<u>Percentage by Weight:</u>	<u>CAS No.</u>	<u>TLV (Units)</u>
Zinc (Zn)	7.00	Mixture	not listed
Other ingredients, including Urea	93.00	57-13-6	not listed
Zinc Sulfate		7733-02-0	not listed
Lignosulfonic Acid		8062-15-5	not listed
Water		7732-18-5	not listed

**4. FIRST AID MEASURES**

**If swallowed:** 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 a poison control center or doctor. Do not give anything by mouth to an unconscious person.

**If in eyes:** Hold eyes open and rinse slowly and gently with water for 15-20 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.

**If inhaled:** 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.

**If on skin or clothing:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for further treatment advice.

**FOR A MEDICAL EMERGENCY INVOLVING THIS PRODUCT CALL: 1-800-561-8273.** Have the product label or container with you when calling a poison control centre or doctor, or going for treatment.

**NOTE TO PHYSICIAN:** No known antidote, treat symptomatically.

**5. FIRE FIGHTING MEASURES**

**FLASH POINT (°F/Test Method):** Does not flash.  
**FLAMMABLE LIMITS (LFL & UFL):** Not established  
**EXTINGUISHING MEDIA:** Considered non-combustible, use medium appropriate to surrounding fire. Dry chemical, carbon dioxide (CO<sub>2</sub>), foam, water spray or fog.  
**HAZARDOUS COMBUSTION PRODUCTS:** May include but are not limited to oxides of carbon, oxides of nitrogen, and other asphyxiants.  
**SPECIAL FIRE FIGHTING PROCEDURES:** Use water spray to cool containers exposed to fire. Remain upwind. Avoid breathing smoke. Wear self-contained breathing apparatus and full protective gear.  
**UNUSUAL FIRE AND EXPLOSION HAZARDS:** Containers may burst due to pressure build-up of ammonia.

**6. ACCIDENTAL RELEASE MEASURES**

**STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:**

Ventilate area. Contain spill, absorb liquid with clay or other absorbent material. Sweep up material and place in container for possible land application according to label use or for proper disposal. Check local and provincial regulations for proper disposal.

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

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**7. HANDLING AND STORAGE**

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**HANDLING:** Work in well ventilated area. Wear a NIOSH approved respirator for mists and vapours. Wear chemical impervious gloves, footwear, coveralls or impervious apron. Protect eyes with goggles or a face shield. Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Remove clothing immediately if product gets inside. Then wash thoroughly and put on clean clothing. Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

**STORAGE:** May be stored for short periods (up to 3 months) in mild steel. For longer storage, use stainless steel, fiberglass, polyethylene, or certain other plastic materials. Copper or any of its alloys (brass or bronze) should never be used in any handling system. Aluminum tanks are not recommended for storage of this product. Store above 32°F / 0°C and out of direct sunlight. Do not use food or drink containers for mixing or storage. Do not contaminate water, food, or feed by storage or disposal.

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**8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

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**ENGINEERING CONTROLS:** Not normally required. If odour is too strong use local ventilation.

**RESPIRATORY PROTECTION:** Not normally required, if vapours are too strong wear a NIOSH/MSHA approved respirator for mists and vapours.

**EYE PROTECTION:** Goggles or face shield.

**SKIN PROTECTION:** Wear protective clothing: coveralls or impervious apron, shoes with socks. Wear chemical-impervious gloves.

**OSHA PEL 8 hr TWA**  
Not listed

**ACGIH TLV-TWA**  
Not listed

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**9. PHYSICAL AND CHEMICAL PROPERTIES**

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**APPEARANCE AND ODOUR:** Light brown-coloured solution with charred wood odour. **SOLUBILITY:** Complete

**SPECIFIC GRAVITY (Water = 1):** 1.224 g/ml **BULK DENSITY:** 1.224 kg/L **pH:** 2.5 (5% solution)

**VAPOUR PRESSURE:** Not established **BOILING POINT:** 212°F/100°C

**PERCENT VOLATILE (by volume):** Not established **EVAPORATION RATE: (Butyl Acetate = 1):** 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.

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**10. STABILITY AND REACTIVITY**

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**STABILITY:** Stable

**CONDITIONS TO AVOID:** Excessive heat.

**INCOMPATIBILITY:** Strong acids and bases.

**HAZARDOUS DECOMPOSITION PRODUCTS:** May include but are not limited to oxides of carbon, oxides of nitrogen, and other asphyxiants.

**HAZARDOUS POLYMERIZATION:** Will not occur.

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**11. TOXICOLOGICAL INFORMATION**

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**Acute Oral LD<sub>50</sub> (male rat):** > 2000 mg/kg **Acute Dermal LD<sub>50</sub> (rabbit):** Not established

**Eye Irritation (rabbit):** Causes irritation **Skin Irritation (rabbit):** May cause irritation

**Inhalation LC<sub>50</sub> (female rat):** Not established. **Skin Sensitization (Guinea Pig):** Not established

**Carcinogenic Potential:** Not listed in OSHA, NTP, IARC, or ACGIH.

**Target Organs:** None

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**12. ECOLOGICAL INFORMATION**

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Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water by cleaning of equipment or disposal of wastes.

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**13. DISPOSAL CONSIDERATIONS**

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Do not reuse containers for any purpose. Container is recyclable, and is to be disposed of at a container collection site. Contact your local dealer/distributor for the location of the nearest collection site. Before taking container to the collection site: Triple or pressure-rinse the empty container, adding the rinsate to the spray tank. Make the empty container unsuitable for further use. If there is no container collection site in your area, dispose of the container in accordance with provincial requirements. For information on disposal of unused, unwanted product, contact the manufacturer or the provincial regulatory agency. Do not contaminate water, food, or feed by storage or disposal.

**14. TRANSPORT INFORMATION**

**DOT/TDG Shipping Description:** NOT REGULATED

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

**IMDG Shipping Description:** NOT REGULATED

Consult appropriate ICAO/IATA regulations for shipment requirements in the Air shipping mode.

**15. REGULATORY INFORMATION**

**NFPA & HMIS Hazard Ratings:**

NFPA

HMIS

1 Health	0 Least	1 Health
0 Flammability	1 Slight	0 Flammability
0 Instability	2 Moderate	0 Reactivity
	3 High	B PPE
	4 Severe	

**SARA Hazard Notification/Reporting**

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

**WHMIS Controlled: Classification D2**

**Reportable Quantity (RQ) under U.S. CERCLA:** Zinc Sulfate (CAS: 7733-02-0) 1000 lbs.

**SARA, Title III, Section 313:** Zinc Sulfate (CAS: 7733-02-0)

**RCRA Waste Code:** Not listed

**CA Proposition 65:** Not listed

**16. OTHER INFORMATION**

**MSDS STATUS:** Sections 1 and 4 revised

**PREPARED BY:** Registrations and Regulatory Affairs

**REVIEWED BY:** Environmental Health and Safety

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