

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 IDENTIFICATION

MANUFACTURED FOR AND 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: Mixture

PRODUCT USE: Seed Treatment with Micronutrients

REG. NO.: 2012003D – Fertilizers Act

MSDS Number: 2012003D-12-LPI

MSDS Revisions: Sections 1, 13

Date of Issue: 06/06/12

Supersedes: 10/31/11

2. HAZARDS IDENTIFICATION SUMMARY

KEEP OUT OF REACH OF CHILDREN – CAUTION - May be harmful if swallowed, inhaled or absorbed through skin. May cause eye and skin irritation. Avoid contact with eyes, skin and clothing. Avoid contact with open cuts or sores. Avoid breathing vapours. Use with adequate ventilation. Eye protection and gloves are suggested when handling undiluted product. Wash thoroughly after handling and using this product. In case of contact, flush with water. Get medical attention for eyes. This blended liquid seed treatment is derived from Anhydrous Ammonia, Acetic Acid, Potassium Nitrate, Urea Ammonium Nitrate Solution, Sodium Borate, Copper Sulphate, Ferrous Sulphate, Manganese Sulphate, Sodium Molybdate, Zinc Oxide, Zinc Sulphate, Citric Acid (chelation agent and pH adjustment), and water (diluent). 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.

This product is a clear dark green-coloured liquid with slightly sweet non-offensive odour.

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)	6.00	Mixture	not listed
Soluble Potash (K ₂ O)	1.00	Mixture	not listed
Zinc (Zn)	5.05	Mixture	not listed
Micro ingredients: B, Cu, Fe, Mn, Mo	0.781	Mixture	not listed
Water (diluent)	49.80	7789-20-0	not listed
Fertilizer salts and inert ingredients, including Citric Acid (chelation agent, pH adjustment)	37.369	77-92-9	not listed

4. FIRST AID MEASURES

If in eyes:	Flush with running water for at least 15 minutes while holding eyelids open to help flush out material. Get medical attention.
If on skin:	Remove all contaminated clothing. Wash skin and hair thoroughly with soap and water. Wash clothing before reuse. If irritation persists, get medical attention.
If swallowed:	Drink 1-2 glasses of water and induce vomiting. Never induce vomiting or give anything by mouth to an unconscious person. Keep head lower than chest to avoid aspiration into lungs. Call a physician immediately or contact poison control center.
If inhaled:	Remove to fresh air. If breathing is difficult, administer oxygen; if breathing stops, administer artificial respiration. Get medical attention immediately.

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 (CO₂), foam, water spray or fog.

HAZARDOUS COMBUSTION PRODUCTS:

May include but are not limited to oxides of carbon and oxides of sulfur, ammonia, and oxides of nitrogen.

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 aqua 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, state and federal regulations for proper disposal.

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

7. HANDLING AND STORAGE

HANDLING: Open the container carefully. Contents may be under pressure and has a distinct odor of ammonia. Eye protection and gloves are suggested when handling undiluted product. Use with adequate ventilation.

STORAGE: Keep container tightly closed when not in use. A poorly sealed container may adversely affect product quality. Store in original container only. Store in a dry place above 40°F. Avoid freezing. If product freezes, allow it to warm and then mix thoroughly before use. Do not use food or drink containers for mixing or storage. Do not contaminate water, food, or feed by storage or disposal.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS: Not normally required. If ammonia odor is too strong use local or mechanical ventilation.

RESPIRATORY PROTECTION: Not normally required, if ammonia vapors are too strong wear a NIOSH approved respirator for anhydrous ammonia.

EYE PROTECTION: Chemical goggles or shielded safety glasses.

SKIN PROTECTION: Wear protective clothing: long-sleeved shirts and pants, shoes plus socks. Wear rubber or chemical-resistant gloves.

Ammonia	OSHA PEL 8 hr TWA 35 mg/m ³	ACGIH TLV-TWA 17 mg/m ³
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9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOR: Clear dark green-coloured liquid with slightly sweet non-offensive odour	SOLUBILITY: Soluble
SPECIFIC GRAVITY (Water = 1): 1.188g/ml	BULK DENSITY: 1.19 kg/L
VAPOR PRESSURE: Not established	BOILING POINT: 212°F/100°C
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: Excessive heat. Keep containers tightly closed.

INCOMPATIBILITY: Strong oxidizers.

HAZARDOUS DECOMPOSITION PRODUCTS: May include but are not limited to oxides of carbon and oxides of sulfur, ammonia, and oxides of nitrogen.

HAZARDOUS POLYMERIZATION: Will not occur.

11. TOXICOLOGICAL INFORMATION

Acute Oral LD₅₀ (rat): Ammonia: 350 mg/kg	Acute Dermal LD₅₀ (rabbit): not established
Eye Irritation (rabbit): Causes mild irritation	Skin Irritation (rabbit): Causes mild irritation
Inhalation LC₅₀ (rat): 2000 ppm (4 hr).	Skin Sensitization (guinea pig): not established.
Carcinogenic Potential: None listed in OSHA, NTP, IARC or ACGIH	

12. ECOLOGICAL INFORMATION

Material is toxic to fish and other aquatic organisms.
Do not contaminate water supplies.

13. DISPOSAL CONSIDERATIONS

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

TDG/DOT Shipping Description: NOT REGULATED**Freight Classification:** FERTILIZING COMPOUNDS (MANUFACTURED FERTILIZERS), NOI, LIQUID (NMFC 68140, SUB 6; CLASS 70)

Consult appropriate ICAO/IATA and IMDG regulations for shipment requirements in the Air and Maritime shipping modes

15. REGULATORY INFORMATION

NFPA & HMIS Hazard Ratings:**NFPA**

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

HMIS

1	Health
0	Flammability
1	Reactivity
B	PPE

SARA Hazard Notification/Reporting

SARA Title III Hazard Category:	Immediate	<u>Y</u>	Fire	<u>N</u>	Sudden Release of Pressure	<u>N</u>
	Delayed	<u>N</u>	Reactive	<u>N</u>		

Reportable Quantity (RQ) under U.S. CERCLA: Ammonia (CAS: 7664-41-7) 100 pounds**SARA, Title III, Section 313:** Ammonia (CAS: 7664-41-7)**RCRA Waste Code:** Not listed**CA Proposition 65:** Not listed

16. OTHER INFORMATION

MSDS STATUS: Section 1 and 13 revised**PREPARED BY:** Registrations and Regulatory Affairs**REVIEWED BY:** Environmental Health and Safety*®Awaken is a registered trademark of Loveland Products Inc.*

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