

FOR CHEMICAL EMERGENCY, SPILL, LEAK, FIRE, EXPOSURE OR ACCIDENT, CALL DAY OR NIGHT 1-800-561-8273 or CHEMTREC – DAY OR NIGHT 1 800-424-9300

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

- 1.1 **PRODUCT IDENTIFIER:** MULTI-PURPOSE FERTILIZER
TRADE NAME: AWAKEN® 16-0-2
- 1.2 **RECOMMENDED USE:** FERTILIZER
- 1.3 **MANUFACTURED FOR AND DISTRIBUTED BY:**
LOVELAND PRODUCTS CANADA, INC.
789 DONNYBROOK DRIVE • DORCHESTER, ONTARIO N0L 1G5
- 1.4 **24 Hour Emergency Phone: (Chemtrec):** 1-800-424-9300 (Toll Free) - **Additional Emergency Phone** 1-800-561-8273
Loveland Technical Service: 1-800-328-4678
U.S. Coast Guard National Response Center: 1-800-424-8802

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Acute Toxicity - Oral	Category 4	H302
Eye Damage/Irritation	Category 2B	H320

2.2 Label elements



Signal word: **WARNING**
Hazard Statement: H302 – Harmful if swallowed.
H320 – Causes eye irritation.
H313 – May be harmful in contact with skin.
H333 – May be harmful if inhaled.

Precautionary Statement: (Prevention): P264 – Wash hands and face thoroughly after handling.
P270 – Do not eat, drink or smoke when using this product.

Precautionary Statement: (Response): P301+P312 – IF SWALLOWED: Call a poison centre or doctor/physician if you feel unwell.
P330 – Rinse mouth.
P305+P351+P338 – IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313 – If eye irritation persists: Get medical advice/attention.

Precautionary Statement: (Storage): Not required or applicable.

Precautionary Statement: (Disposal): P501 – Dispose of contents/container according to local and provincial regulations.

2.3 Other hazards

None known



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3. COMPOSITION, INFORMATION ON INGREDIENTS

3.1 Substances

3.2 Mixtures

Chemical Name:	CAS No.	Concentration [%]
Proprietary	Proprietary	19
Anhydrous Ammonia	7664-41-7	3
Zinc Oxide	1314-13-2	3 – 4
Urea	57-13-6	6 – 7
Ammonium Nitrate	6484-52-2	6 – 7
Potassium Acetate	127-08-2	6 – 7
Manganese Sulfate, Monohydrate	10034-96-5	< 1
Ferrous Sulfate, Heptahydrate	7720-78-7	< 1
Zinc Sulfate, Monohydrate	7446-19-7	< 1
Copper Sulfate, Monohydrate	7758-99-8	< 1
Sodium Borate	12008-41-2	< 0.05
Sodium Molybdate	10102-40-6	Trace
Citric Acid	77-92-9	< 1
Water	7732-18-5	32

4. FIRST AID MEASURES

4.1 Description of First Aid Measures

General Advice: Get medical attention if symptoms occur.

- Eye contact:** Hold eye 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 centre or doctor for treatment advice.
- Ingestion:** Call a poison control centre 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 centre or doctor. Do not give anything by mouth to an unconscious person.
- Skin contact:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control centre or doctor for treatment advice.
- Inhalation:** 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 centre or doctor for treatment advice.

4.2 Most Important Symptoms and Effects, Acute and Delayed

Symptoms: Eye irritation. Harmful if swallowed.

4.3 Immediate Medical Attention and Special Treatment

Treatment: Treat symptomatically. Symptoms may be delayed.

FOR A MEDICAL EMERGENCY INVOLVING THIS PRODUCT CALL: 1-800-561-8273

Take container, label or product name and Fertilizers Act Registration Number with you when seeking medical attention.

NOTES TO PHYSICIAN: No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

5. FIRE FIGHTING MEASURES

5.1 EXTINGUISHING MEDIA:

Suitable Extinguishing Media: Foam, carbon dioxide (CO₂), dry powder, water spray. Do not use water jet as this will spread the fire.

5.2 SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE:

Specific Hazards During Firefighting: During a fire, oxides of carbon and silicon dioxide can be released.

5.3 SPECIAL PROTECTIVE EQUIPMENT AND PRECAUTIONS FOR FIREFIGHTERS

Special Protective Equipment for Firefighters: Self-contained breathing apparatus and full protective gear should be worn in fighting large fires involving chemicals. Use water spray to keep fire exposed containers cool. Keep people away. Isolate fire and deny unnecessary entry.



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6. ACCIDENTAL RELEASE MEASURES

6.1 PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

Personal Precautions: Avoid inhalation of vapours, dusts and spray mist and contact with skin and eyes. Ensure adequate ventilation. Wear suitable protective clothing.

6.2 ENVIRONMENTAL PRECAUTIONS

Environmental Precautions: Prevent further leakage or spillage if safe to do so. Do not contaminate water. Do not allow to enter drains, sewers, or watercourses.

6.3 METHODS AND MATERIALS FOR CONTAINMENT AND CLEAN-UP

Methods for Clean-Up: Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. After removal flush contaminated area thoroughly with water.
Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to Remove residual contamination.
Never return spills to original containers for re-use.

7. HANDLING AND STORAGE

7.1 PRECAUTIONS FOR SAFE HANDLING:

Advice on Safe Handling: Avoid inhalation of dusts, vapours / spray and contact with eyes, skin and clothing. Do not breathe dusts, mist or vapour. Wear personal protective equipment. Do not use in areas without adequate ventilation. Avoid prolonged exposure. Wash thoroughly after handling. Do not empty into drains. Handle and open container with care. Use care in handling/storage. Wash before eating, drinking and/or smoking.

7.2 CONDITIONS FOR SAFE STORAGE:

Requirements for Storage Areas and Containers: Store in original containers only. KEEP CONTAINER TIGHTLY CLOSED WHEN NOT IN USE. LOSS OF AMMONIA MAY CAUSE PRODUCT TO SOLIDIFY. Store in a cool, dry, well-ventilated place, preferably in a locked storage area. Store out of direct sunlight. Do not contaminate water, food or feed by storage or disposal.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 CONTROL PARAMETERS:

OCCUPATIONAL EXPOSURE LIMITS

U.S. Workplace Exposure Level (ACGIH®) STEL/CEIL (C)

Components	Type	Value
Ammonia	TWA	17 mg/m ³
	STEL/CEIL (C)	24 mg/m ³
Proprietary component	TWA	25 mg/m ³
	STEL/CEIL (C)	37 mg/m ³
Zinc Oxide	TWA	2 mg/m ³ R (Measured as respirable fraction of the aerosol.)

U.S. Workplace Exposure Level (OSHA) PELs

Components	Type	Value
Ammonia	TWA	35 mg/m ³
Proprietary component	TWA	25 mg/m ³
Zinc Oxide	TWA	5 mg/m ³ (Respirable fraction)

Biological limit values

ACGIH Biological Exposure Indices

Components	Value	Specimen
No listings		

8.2 EXPOSURE CONTROLS:**Engineering Measures**

Provide adequate general and local exhaust ventilation. Observe Occupational Exposure Limits and minimize the risk of inhalation of vapors and spray mists. Provide eyewash station and safety shower.

Individual Protection Measures:

Eye / Face Protection: Goggles or shielded safety glasses are recommended.

Skin Protection: Chemical resistant clothing is recommended. Routinely wash work clothing and protective equipment to remove contaminants. The use of chemical-resistant gloves is recommended when handling undiluted product. Be aware that the liquid may penetrate the gloves. Frequent change is advisable.

Respiratory Protection: In case of inadequate ventilation or risk of inhalation of mists or vapours, use suitable respiratory equipment such as MSHA/NIOSH approved respirator with approved filter. If respirators are used, a program should be in place to assure compliance with 29 CFR 1910.134, the OSHA Respiratory Protection standard. Wear air supplied respiratory protection if exposure concentrations are unknown.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 APPEARANCE :	Liquid
ODOUR:	Slightly sweet, non-offensive.
ODOUR THRESHOLD:	No data available.
COLOUR:	Clear, dark green.
pH:	6.4 (neat)
MELTING POINT / FREEZING POINT:	No data available
BOILING POINT:	212 °F / 100 °C
FLASH POINT:	No data available.
FLAMMABILITY (solid, gas):	No data available.
UPPER / LOWER FLAMMABILITY OR EXPLOSIVE LIMITS:	No data available.
VAPOUR PRESSURE:	No data available.
SOLUBILITY:	Soluble
PARTITION CO-EFFICIENT, n-OCTANOL / WATER:	No data available.
AUTO-IGNITION TEMPERATURE:	No data available.
DECOMPOSITION TEMPERATURE:	No data available
VISCOSITY:	No data available
SPECIFIC GRAVITY (Water = 1):	1.235 g/ml
DENSITY:	1.23 kg/L

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

10.1 REACTIVITY

Stable

10.2 CHEMICAL STABILITY

Stable under normal temperature conditions

10.3 POSSIBILITY OF HAZARDOUS REACTIONS

No reactions known under normal use conditions. Will not polymerize.

10.4 CONDITIONS TO AVOID

Storage, piping, or handling systems made of brass, copper and galvanized metals may be subject to mild corrosion from prolonged or repeated contact with this product.

10.5 INCOMPATIBLE MATERIALS

Strong oxidizers.

10.6 HAZARDOUS DECOMPOSITION PRODUCTS

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



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11. TOXICOLOGICAL INFORMATION

11.1 LIKELY ROUTES OF EXPOSURE

Eye contact, skin contact.
LC₅₀ (rat): 2,961 – 5,137 mg/m³ (Ammonia – 1 HR).
LD₅₀ Oral (rat): 350 mg/kg (Ammonia); 3,320 mg/kg (Proprietary component)
LD₅₀ Dermal (rat): 1,060 mg/kg (Proprietary component)
Acute Toxicity Estimates: No data available for product
Skin Irritation (rabbit): May cause skin irritation.
Eye Irritation (rabbit): Causes eye irritation.
Specific Target Organ Toxicity: Single exposure: No data available for product.
Aspiration: No data available for product
Skin Sensitization (guinea pig): Not a sensitizer
Carcinogenicity: No data available for product
Germ Cell Mutagenicity: No data available for product
Interactive Effects: None known

12. ECOLOGICAL INFORMATION

12.1 ECOTOXICITY

A toxic hazard to fish. Avoid spills or release to watercourses. The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment. This product is not intended for use in aquatic settings.

Ecotoxicological Data

Components	Species	Test Results
Proprietary component	Fathead minnow	300.82 mg/L – 96 hour LC ₅₀
	Daphnia magna	>300.82 – 48 hour EC ₅₀
Ammonia, anhydrous	Hypophthalmichthys nobilis)	0.3 mg/L – 96 hour LC ₅₀
Zinc Oxide	Oncorhynchus mykiss	1.1 ppm – 96 hour LC ₅₀
	Daphnia magna	98 µ/L – 48 hour EC ₅₀

Drift or runoff may adversely affect non-target plants.
 Do not apply directly to water.
 Do not contaminate water when disposing of equipment wash water.
 Do not apply when weather conditions favor drift from target area.

12.2 PERSISTENCE AND DEGRADABILITY

Biodegradability: No data available

12.3 BIOACCUMULATIVE POTENTIAL

Bioaccumulation: No data available.

12.4 MOBILITY IN SOIL

No data available.

12.5 OTHER ADVERSE EFFECTS

Assessment: No data available.

13. DISPOSAL CONSIDERATIONS

13.1 WASTE TREATMENT METHODS

Do not reuse containers for any purpose. 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. For disposal, the container may be returned to the point of purchase (distributor/dealer). It must be refilled by the distributor/dealer with the same product. Do not reuse the product container for any other purpose.



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14. TRANSPORT INFORMATION

14.1 LAND TRANSPORT

TDG Shipping Description: NOT REGULATED.

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

15. REGULATORY INFORMATION

15.1 SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS

NFPA & HMIS Hazard Ratings:

NFPA

HMIS

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

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); Zinc Compounds

RCRA Waste Code: Not listed

CA Proposition 65: Not applicable.

16. OTHER INFORMATION

SDS STATUS: Section 1 revised

PREPARED BY: Product Stewardship and Regulatory Affairs

REVIEWED BY: Safety, Health and Environment

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