

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

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

- 1.1 **PRODUCT IDENTIFIER:**
TRADE NAME: ASULAM HERBICIDE
- 1.2 **RECOMMENDED USE:** GROUP 18 HERBICIDE FOR AGRICULTURAL OR COMMERCIAL USE
- 1.3 **SUPPLIER DETAILS:**
 LOVELAND PRODUCTS, INC.
 P.O. Box 1286 • Greeley, CO 80632-1286
- 1.4 **24 Hour Emergency Phone:** 1-800-424-9300 - **Medical Emergencies:** 1-866-944-8565 – **Product Information:** 1-888-574-2878 (LPI-CUST)
U.S. Coast Guard National Response Center: 1-800-424-8802
U.S. Coast Guard National Response Center: 1-800-424-8802

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification according to 29 CFR 1910.1200

Acute Toxicity – Dermal	Category 4	H312
Acute Toxicity – Inhalation	Category 3	H331
Skin Corrosion/Irritation	Category 2	H315
Eye Damage/Irritation	Category 1	H318
Sensitization – Skin	Category 1	H317

2.2 Label elements



Signal word: DANGER
 Hazard Statement: H312 – Harmful in contact with skin.
 H331 – Toxic if inhaled.
 H315 – Causes skin irritation.
 H318 – Causes serious eye damage.
 H317 – May cause an allergic skin reaction.

Precautionary Statement: (Prevention): P280 – Wear protective gloves/protective clothing/eye protection/face protection.
 P261 – Avoid breathing dust/fume/gas/mist/vapors/spray.
 P271 – Use only outdoors or in a well-ventilated area.
 P264 – Wash hands thoroughly after handling.
 P272 – Contaminated work clothing must not be allowed out of the workplace.

Precautionary Statement: (Response): P302+P352: IF ON SKIN: Wash with plenty of soap and water.
 P312 – Call a poison center/doctor/physician if you feel unwell.
 P321 – Specific treatment (see First Aid on the product label).
 P361 – Take off immediately all contaminated clothing and wash it before reuse.
 P304+P340: IF INHALED: Remove person to fresh air and keep at rest in a position comfortable for breathing.
 P311 – Call a poison center/doctor/physician.
 P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P310 – Immediately call a POISON CENTER or doctor/physician.
 P333+P311 – If skin irritation or rash occurs: Get medical advice/attention.
 P363 – Wash contaminated clothing before reuse.

Precautionary Statement: (Storage): P403+P233: Store in a well ventilated place. Keep container tightly closed.
 P405 – Store locked up.



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Precautionary Statement:
(Disposal): P501 – Dispose of contents/container to an approved waste disposal facility.

2.3 Other hazards

Hazards Not Otherwise Classified (HNOC): Very toxic to aquatic life with long lasting effects.

3. COMPOSITION, INFORMATION ON INGREDIENTS

3.1 Substances

3.2 Mixtures

Classification according to 29 CFR 1910.1200

Chemical Name:	CAS No.	Concentration [%]
Ammonium hydroxide	1336-21-6	2.10
Asulam sodium	2302-17-2	35.00 – 37.00
Ethoxylated tallowamine	61791-26-2	2.20
*Other ingredients (including Citric acid)	Trade Secret 77-92-9	58.70 - 60.70

*Ingredients not specifically listed are non-hazardous or are to be considered proprietary or confidential business information per 29 CFR 1910.1200(i)

4. FIRST AID MEASURES

4.1 Description of First Aid Measures

General Advice: Get medical attention if symptoms occur.

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

If in eyes: 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 center or doctor for treatment advice.

4.2 Most Important Symptoms and Effects, Acute and Delayed

Symptoms: Eyes: Causes serious eye damage.
Inhalation: Toxic if inhaled.

4.3 Immediate Medical Attention and Special Treatment

Treatment: Treat symptomatically. Symptoms may be delayed.

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

Take container, label or product name with you when seeking medical attention.

NOTES TO PHYSICIAN: Treat symptomatically.



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5. FIRE FIGHTING MEASURES

- 5.1 EXTINGUISHING MEDIA:**
Suitable Extinguishing Media: Use medium appropriate to surrounding fire. Dry chemical, carbon dioxide (CO₂), alcohol foam, foam, water spray or fog.
- 5.2 SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE:**
Specific Hazards During Firefighting: Oxides of carbon, oxides of nitrogen, and oxides of sulfur may be released in a fire situation.
- 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.

6. ACCIDENTAL RELEASE MEASURES

- 6.1 PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES**
Personal Precautions: Avoid contact with skin and eyes. Ensure adequate ventilation. Wear suitable personal protective clothing.
- 6.2 ENVIRONMENTAL PRECAUTIONS**
Environmental Precautions: Consult competent regulatory specialists to determine if any state or local reporting requirements exist and for assistance in waste characterization and/or hazardous waste disposal if required.
- 6.3 METHODS AND MATERIALS FOR CONTAINMENT AND CLEAN-UP**
Methods for Clean-Up: Contain spill and absorb with suitable absorbent, sweep up material and transfer to containers for possible land application according to label use or for proper disposal. Wash spill area with water containing strong detergent, absorb and sweep up as above. Check local, state and federal regulations for proper disposal. Never return spills to original containers for re-use.

7. HANDLING AND STORAGE

- 7.1 PRECAUTIONS FOR SAFE HANDLING:**
Advice on Safe Handling: Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Remove clothing immediately if pesticide 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.
- 7.2 CONDITIONS FOR SAFE STORAGE:**
Requirements for Storage Areas and Containers: Store at temperatures above 32°F. Do not allow product to freeze. 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) TLVs**

Components	Type	Value
No listings	TWA	

- U.S. Workplace Exposure Level (OSHA) PELs**

Components	Type	Value
No listings	TWA	

- Biological limit values**
- ACGIH Biological Exposure Indices**

Components	Value	Specimen
No listings		



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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: Long-sleeved shirt and long pants. Chemical-resistant gloves, such as nitrile, butyl, neoprene and/or barrier laminate. Shoes plus socks.

Respiratory Protection: In case of inadequate ventilation or risk of inhalation of mists or vapors, use suitable respiratory equipment such as MSHA/NIOSH TC-84A with NIOSH equipped N, R, or P class filter media. Wear respiratory protection during operations where spraying or misting occurs. 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
ODOR: None.
ODOR THRESHOLD: No data available.
COLOR: Brown.
pH: 7.5
MELTING POINT / FREEZING POINT: 8.5 °C (47.3 °F)
BOILING POINT: 219.2 °F (104 °C)
FLASH POINT: No data available.
FLAMMABILITY (solid, gas): No data available.
UPPER / LOWER FLAMMABILITY OR EXPLOSIVE LIMITS: No data available.
VAPOR 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): 1.18 g/ml @ 20 °C
DENSITY: 9.84 lbs/gal | 1.18 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 data available. Will not polymerize.

10.4 CONDITIONS TO AVOID

Freezing temperatures.

10.5 INCOMPATIBLE MATERIALS

Acids.

10.6 HAZARDOUS DECOMPOSITION PRODUCTS

Oxides of carbon, oxides of nitrogen, and oxides of sulfur may be released in a fire situation.



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11 TOXICOLOGICAL INFORMATION

11.3 LIKELY ROUTES OF EXPOSURE

Eye contact. Ingestion. Inhalation. Dermal.

LC₅₀ (rat): > 5.00 mg/L (4 HR)

LD₅₀ Oral (rat): > 5,000 mg/kg

LD₅₀ Dermal (rat): > 2,000 mg/kg

Acute Toxicity Estimates: No data available.

Skin Irritation (rabbit): Not an irritant.

Eye Irritation (rabbit): Slight irritant.

Specific Target Organ Toxicity: Eyes, skin, respiratory system, central nervous system, liver.

Aspiration: No data available

Skin Sensitization (guinea pig): Sensitizer

Carcinogenicity: No data available.

Germ Cell Mutagenicity: No data available.

Interactive Effects: None known

12 ECOLOGICAL INFORMATION

12.3 ECOTOXICITY

This chemical is known to leach through soil into ground water under certain conditions as a result of agricultural use. Use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in ground water contamination. Surface water contamination may occur in areas with poorly draining soils and little or no buffers or in areas where drainage systems flow directly to surface water. Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark.

Ecotoxicological Data

Species	Test Results
No data available	

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.



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13 DISPOSAL CONSIDERATIONS

13.1 WASTE TREATMENT METHODS

PESTICIDE DISPOSAL: Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

CONTAINER DISPOSAL: Non-refillable container. Do not reuse this container to hold materials other than pesticides or dilute pesticides (rinsate). After emptying and cleaning, it may be allowable to temporarily hold rinsate or other pesticide-related materials in the container. Contact your state regulatory agency to determine allowable practices in your state. Once cleaned, some agricultural plastic pesticide containers can be taken to a container collection site or picked up for recycling. To find the nearest site, contact your chemical dealer or manufacturer, or contact The Agricultural Container Recycling Council (ACRC) at www.acrecycle.org. If not recycled, then puncture and dispose of in a sanitary landfill, or incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke. Triple rinse or pressure rinse container (or equivalent) promptly after emptying. **(For packages up to 5 gallons:) Triple rinse as follows:** Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. **Pressure rinse as follows:** Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip. **(For packages greater than 5 gallons or 50 lbs.): Triple rinse as follows:** Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. **Pressure rinse as follows:** Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip. **(For square bottom caged totes greater than 55 gals.): Triple rinse or pressure rinse as follows:** Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Fill the container about ¼ full with water, rinsing down all sides inside the container thoroughly. Recirculate water with the pump for 2 minutes. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. **(For refillable containers:)** Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. Do not contaminate water, food or feed by storage or disposal.

14 TRANSPORT INFORMATION

14.3 LAND TRANSPORT

DOT Shipping Description: NOT REGULATED BY DOT.

U.S. Surface Freight Classification: COMPOUND, TREE OR WEED KILLING, NOI (NMFC 50320, SUB 2: CLASS: 60)

15 REGULATORY INFORMATION

15.1 SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS

NFPA & HMIS Hazard Ratings:

NFPA		HMIS	
2	Health	0	Least
0	Flammability	1	Slight
0	Instability	2	Moderate
		3	High
		4	Severe
		2	Health
		0	Flammability
		0	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>Y</u>	Reactive	<u>N</u>		

Reportable Quantity (RQ) under U.S. CERCLA: Ammonium Hydroxide (CAS: 1336-21-6) 1,000 pounds.

SARA, Title III, Section 313: Not listed.

RCRA Waste Code: Not listed.

CA Proposition 65: Not listed.



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This chemical is a pesticide product registered by the United States Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets (SDS), and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

CAUTION

Harmful if absorbed through skin.

Avoid contact with skin, eyes, or clothing.

Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.

16 OTHER INFORMATION

SDS STATUS: Section 16 revised.

PREPARED BY: Product Stewardship and Regulatory Affairs

REVIEWED BY: Safety, Health and Environment

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