1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

1.1 PRODUCT IDENTIFIER: EPA REG. NO.: 34704-687
TRADE NAME: SIMAZINE 4L FLOWABLE HERBICIDE

1.2 RECOMMENDED USE: WEED CONTROL IN CERTAIN CROPS

1.3 SUPPLIER DETAILS:
LOVELAND PRODUCTS, INC.
P.O. Box 1286 • Greeley, CO 80632-1286

U.S. Coast Guard National Response Center: 1-800-424-8902

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture
Classification according to 29 CFR 1910.1200
Carcinogenicity: Category 2
Eye Damage/Eye Irritation: Category 2A

2.2 Label elements

Signal word: WARNING
Hazard Statement: H351 – Suspected of causing cancer.
H319 – Causes serious eye irritation.

Precautionary Statement: P201 – Obtain special instructions before use.
(Prevention): P202 – Do not handle until all safety precautions have been read and understood.
P280 – Wear protective gloves/protective clothing/eye protection/face protection.
P264 – Wash hands and face thoroughly after handling.
P270 – Do not eat, drink or smoke when using this product.

Precautionary Statement: P308+P313 – If exposed or concerned: Get medical advice/attention.
(Response): 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: P405 – Store locked up.

Precautionary Statement: P501 – Dispose of contents/container to an approved waste disposal plant.

2.3 Other hazards
None known
3. COMPOSITION, INFORMATION ON INGREDIENTS

3.1 Substances

3.2 Mixtures

Classification according to 29 CFR 1910.1200

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS No.</th>
<th>Concentration [%]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Simazine</td>
<td>122-34-9</td>
<td>41.90</td>
</tr>
<tr>
<td>Ethylene Glycol</td>
<td>107-21-1</td>
<td>Trade Secret</td>
</tr>
<tr>
<td>Glycerin</td>
<td>56-81-5</td>
<td>Trade Secret</td>
</tr>
</tbody>
</table>

Ingredients not precisely identified are proprietary or non-hazardous.

4. FIRST AID MEASURES

4.1 Description of First Aid Measures

General Advice: Get medical attention if symptoms occur.

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.

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 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 the poison control center or doctor. Do not give anything by mouth to an unconscious person.

If inhaled: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or doctor for further treatment advice.

4.2 Most Important Symptoms and Effects, Acute and Delayed

Symptoms: Causes serious eye irritation.

4.3 Immediate Medical Attention and Special Treatment

Treatment: NOTES TO PHYSICIAN: No specific antidote if ingested. Treat symptomatically.
FOR A MEDICAL EMERGENCY INVOLVING THIS PRODUCT CALL: 1-866-944-8565
Have the product label or container with you when calling a poison control center or doctor or going for treatment.

5. FIRE FIGHTING MEASURES

5.1 EXTINGUISHING MEDIA:

Suitable Extinguishing Media: Use medium appropriate to surrounding fire. Dry chemical, carbon dioxide (CO₂), foam.

5.2 SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE:

Specific Hazards During Firefighting: During a fire, irritating and possibly toxic gases may be generated by thermal decomposition or combustion.

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 inhalation of dusts and contact with skin and eyes. Ensure adequate ventilation. Wear suitable protective clothing. Remove all sources of ignition.

6.2 ENVIRONMENTAL PRECAUTIONS

**Environmental Precautions:**
This pesticide is toxic to aquatic invertebrates. 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 when disposing of equipment washwaters or rinsate.

6.3 METHODS AND MATERIALS FOR CONTAINMENT AND CLEAN-UP

**Methods for Clean-Up:**
Contain the spill at its source. Contain the spill to prevent spreading or contaminating soil or from entering sewage and drainage systems or any body of water. Clean up spills immediately, observing precautions in section 8. Cover entire spill with absorbing material and place into a compatible disposal container. Scrub the area with a hard water detergent. Pick up wash liquid with additional absorbent and place into a compatible disposal container. Once all material is cleaned up and placed in a disposal container, seal container and arrange for disposition.

7. HANDLING AND STORAGE

7.1 PRECAUTIONS FOR SAFE HANDLING:

**Advice on Safe Handling:**
Follow manufacturer’s instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry. Discard clothing and other absorbent material that have been drenched or heavily contaminated with the product’s concentrate. Do not reuse them. 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 in a safe manner. Store in original container only. Store in a cool, dry place. Store locked up. Do not contaminate water, food or feed by storage or disposal.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 CONTROL PARAMETERS:

**OCCUPATIONAL EXPOSURE LIMITS**

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Simazine</td>
<td>TWA</td>
<td>0.5 mg/m³ (Measured as Inhalable fraction of the aerosol)</td>
</tr>
<tr>
<td>Ethylene Glycol</td>
<td>TWA</td>
<td>100 mg/m³ (Ceiling – Aerosol)</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glycerin</td>
<td>TWA</td>
<td>15 mg/m³ (Total dust), Mist</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5 mg/m³ (Respirable fraction), Mist</td>
</tr>
</tbody>
</table>

**Biological limit values**

<table>
<thead>
<tr>
<th>ACGIH Biological Exposure Indices</th>
</tr>
</thead>
<tbody>
<tr>
<td>Components</td>
</tr>
<tr>
<td>-----------</td>
</tr>
<tr>
<td>No listings</td>
</tr>
</tbody>
</table>
8.2 EXPOSURE CONTROLS:

Engineering Measures
THE FOLLOWING RECOMMENDATIONS FOR EXPOSURE CONTROLS/PERSONAL PROTECTION ARE INTENDED FOR THE MANUFACTURE, FORMULATION, PACKAGING AND USE OF THIS PRODUCT.

Individual Protection Measures:
Eye / Face Protection: Goggles or shielded safety glasses are recommended.
Skin Protection: Coveralls over long-sleeved shirt and long pants. Chemical-resistant gloves. Chemical-resistant apron. Chemical-resistant footwear and socks.
Respiratory Protection: In case of inadequate ventilation or risk of inhalation of mists or vapors, use suitable respiratory equipment approved by MSHA/NIOSH. 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: Odorless.
ODOR THRESHOLD: No data available.
COLOR: Light tan.
pH: 6 – 8 (10% solution)
MELTING POINT / FREEZING POINT: Not applicable.
BOILING POINT: 207 – 225°F / 97 – 107°C.
FLASH POINT: Not applicable.
FLAMMABILITY (solid, gas): Not applicable.
UPPER / LOWER FLAMMABILITY OR EXPLOSIVE LIMITS: No data available.
VAPOR PRESSURE: 2.2 x 10^-2 @ 25°C (based on Simazine).
SOLUBILITY: Soluble / 6.2 mg/l @ 72°F / 22°C.
PARTITION CO-EFFICIENT, n-OCTANOL / WATER: No data available.
AUTO-IGNITION TEMPERATURE: No data available.
DECOMPOSITION TEMPERATURE: No data available.
VISCOSITY: (kinematic): No data available.
SPECIFIC GRAVITY (Water = 1): 1.143 g/ml
DENSITY: 9.54 lbs./gal / 1.14 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
None known.

10.5 INCOMPATIBLE MATERIALS
None known.

10.6 HAZARDOUS DECOMPOSITION PRODUCTS
None known.
11 TOXICOLOGICAL INFORMATION

11.3 LIKELY ROUTES OF EXPOSURE
Eyes, Dermal, inhalation, ingestion.
\( LC_{50} \) (rat): > 2.5 mg/L (4H)
\( LD_{50} \) Oral (rat): > 5,000 mg/kg.
\( LD_{50} \) Dermal (rabbit): > 2,000 mg/kg

Acute Toxicity Estimates: No data available.

Eye Irritation (rabbit): Serious eye irritant.
Skin Irritation (rabbit): Slightly irritating.
Inhalation: Do data available.
Ingestion: Harmful if swallowed.

Aspiration: No data available.
Skin Sensitization (guinea pig): Not a sensitizer
Carcinogenicity: Possible carcinogenicity. IARC-3 (Unclassifiable as to Carcinogenicity in Humans)
Germ Cell Mutagenicity: No data available.
Interactive Effects: None known.

12 ECOLOGICAL INFORMATION

12.3 ECOTOXICITY
The pesticide is toxic to aquatic invertebrates.
Simazine can travel (seep or leach) through soil and can enter ground water which may be used as drinking water. Simazine has been found in ground water. Users are advised not to apply Simazine to sand or loamy sand soils where the water table (ground water) is close to the surface and where these soils are very permeable, i.e., well-drained. Your local agricultural agencies can provide further information on the type of soil in your area and the location of ground water

Ecotoxicological Data

<table>
<thead>
<tr>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Simazine</td>
<td>Rainbow trout</td>
</tr>
<tr>
<td></td>
<td>&gt; 10 ppm – 96-hour ( LC_{50} )</td>
</tr>
<tr>
<td>Daphnia magna</td>
<td>1.1 ppm – 48-hour ( EC_{50} )</td>
</tr>
</tbody>
</table>

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: Low potential for accumulation.

12.4 MOBILITY IN SOIL
Moderate mobility.

12.5 OTHER ADVERSE EFFECTS
Assessment: No data available.

13 DISPOSAL CONSIDERATIONS

13.1 WASTE TREATMENT METHODS

PESTICIDE DISPOSAL: Pesticide wastes may be toxic. Improper disposal of unused pesticide, spray mixture, or rinse water is a violation of Federal law. If these wastes cannot be used according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance in proper disposal methods.

CONTAINER DISPOSAL: Plastic: Triple rinse (or equivalent), 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 incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke. 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

<table>
<thead>
<tr>
<th>NFPA &amp; HMIS Hazard Ratings</th>
<th>NFPA</th>
<th>HMIS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Health</td>
<td>0</td>
<td>1 Health</td>
</tr>
<tr>
<td>1 Flammability</td>
<td>1</td>
<td>1 Flammability</td>
</tr>
<tr>
<td>0 Instability</td>
<td>2</td>
<td>0 Reactivity</td>
</tr>
<tr>
<td>3 High</td>
<td></td>
<td>F PPE</td>
</tr>
<tr>
<td>4 Severe</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

SARA Hazard Notification/Reporting
SARA Title III Hazard Category: Immediate Y Fire N Sudden Release of Pressure N
Delayed N

Reportable Quantity (RQ) under U.S. CERCLA: Not listed.
SARA, Title III, Section 313: Simazine (CAS: 122-34-9) 41.9%; Ethylene Glycol (CAS: 107-21-1) Trade Secret
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.

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
Causes moderate eye irritation.
Avoid contact with eyes, skin, or clothing.
Harmful if swallowed or absorbed through skin or inhaled.

16 OTHER INFORMATION

SDS STATUS: Section 15 revised.
PREPARED BY: Registrations and Regulatory Affairs
REVIEWED BY: Environmental Health and Safety
EPA REG. NO.: 34704-687

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