1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

FORMULATED FOR:
LOVELAND PRODUCTS, INC.
P.O. Box 1286 • Greeley, CO 80632-1286

24-Hour Emergency Phone: 1-800-424-9300
Medical Emergencies: 1-866-944-8565
U.S. Coast Guard National Response Center: 1-800-424-8802

PRODUCT NAME: EMULSIFIER BLEND
CHEMICAL NAME: Mixture
CHEMICAL FAMILY: Emulsifier
CA REG. NO.: Not applicable
WA REG. NO.: Not applicable
MSDS Number: 1000006683-13-LPI
MSDS Revisions: New
Date of Issue: 09/27/13
Supersedes: New

2. HAZARDS IDENTIFICATION SUMMARY

KEEP OUT OF REACH OF CHILDREN – DANGER — Corrosive to eyes and skin. Causes eye and skin burns. Irritating to respiratory system. Causes respiratory tract irritation. Do not breathe vapor or mist. Do not get in eyes or on skin or clothing. Use only with adequate ventilation. Keep container tightly closed and sealed until ready for use. Wash thoroughly after handling.

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

This product is a clear liquid with bland odor. Primary routes of entry are Inhalation, eye contact and skin contact.

3. COMPOSITION, INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical Ingredients</th>
<th>Percentage by Weight</th>
<th>CAS No.</th>
<th>TLV (Units)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nonylphenol ethoxylate</td>
<td>13.00 – 30.00</td>
<td>9016-45-9</td>
<td>not listed</td>
</tr>
<tr>
<td>Amines, tallow alkyl, ethoxylated</td>
<td>13.00 – 30.00</td>
<td>61791-26-2</td>
<td>not listed</td>
</tr>
<tr>
<td>Proprietary component</td>
<td>13.00 – 30.00</td>
<td>Proprietary</td>
<td>not listed</td>
</tr>
<tr>
<td>Proprietary component</td>
<td>7.00 – 13.00</td>
<td>Proprietary</td>
<td>not listed</td>
</tr>
<tr>
<td>Proprietary component</td>
<td>7.00 – 13.00</td>
<td>Proprietary</td>
<td>not listed</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

If in eyes: Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention immediately.

If on skin or clothing: In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention immediately.

If inhaled: Get medical attention immediately. Move exposed person to fresh air. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. The exposed person may need to be kept under medical surveillance for 48 hours.

If swallowed: Get medical attention immediately. Wash out mouth with water. Move exposed person to fresh air. Do not induce vomiting unless directed to do so by medical personnel. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person.

Note to physician: Probable mucosal damage may contraindicate the use of gastric lavage.

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

FLASH POINT (°F/Test Method): 249.8°F / 121°C (CC)
FLAMMABLE LIMITS (LFL & UFL): Not established
EXTINGUISHING MEDIA: May be combustible at high temperature, use medium appropriate to surrounding fire. Dry chemical, carbon dioxide, foam, water spray or fog.
HAZARDOUS COMBUSTION PRODUCTS: Use water spray to cool containers exposed to fire. Remain upwind. Wear self-contained breathing apparatus and full protective gear.
SPECIAL FIRE FIGHTING PROCEDURES: If water is used to fight fire or cool containers, contain runoff, using dikes to prevent contamination of water supplies.
6. ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:
Contain the spill (wear the proper PPE) by absorbing spilled liquid with clay or other absorbent material; scoop or sweep up material and place in container. Decontaminate area by washing with soapy water solution and absorbing the water with absorbent material. 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: 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.


8. EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS: General ventilation is recommended.

RESPIRATORY PROTECTION: Not normally required, if vapors or mists exceed acceptable levels, wear a NIOSH approved respirator for oils and mists.

EYE PROTECTION: Chemical goggles or shielded safety glasses.


PERSONAL PROTECTIVE EQUIPMENT: Applicators and other handlers must wear protective eyewear (goggles or face shield), chemical-resistant gloves, long-sleeved shirt and long pants, shoes plus socks when mixing or applying this product.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOR: Clear liquid with bland odor

SPECIFIC GRAVITY (Water = 1): 0.98 g/ml

BULK DENSITY: 8.18 lbs/gallon

VAPOR PRESSURE: 0.64 mm Hg

BOILING POINT: Not established

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.

10. STABILITY AND REACTIVITY

STABILITY: Stable

CONDITIONS TO AVOID: None known.

INCOMPATIBILITY: None known.

HAZARDOUS DECOMPOSITION PRODUCTS: Incomplete combustion may lead to formation of oxides of carbon oxides of nitrogen.

HAZARDOUS POLYMERIZATION: Will not occur.

11. TOXICOLOGICAL INFORMATION

Acute Oral LD₅₀ (rat): 2,000 – 5,000 mg/kg (similar material)

Eye Irritation (rabbit): Corrosive to eyes. Causes burns.

Acute Inhalation LC₅₀ (rat): Not established.

Carcinogenic Potential: None listed in OSHA, NTP, ACGIH or IARC.

Acute Dermal LD₅₀ (rabbit): > 2,000 mg/kg (similar material)

Skin Irritation (rabbit): Corrosive to skin. Causes burns.

Skin Sensitization (guinea pig): Not established
12. ECOLOGICAL INFORMATION

Very toxic to aquatic organisms. May cause long-term adverse effects in the aquatic environment. Water polluting material. May be harmful to the environment if released in large quantities.

<table>
<thead>
<tr>
<th>Aquatic ecotoxicity</th>
<th>Test</th>
<th>Result</th>
<th>Species</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amines, tallow alkyl, ethoxylated</td>
<td>-</td>
<td>Acute EC₅₀ 3.7 to 7.2 mg/L</td>
<td>Daphnia</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>-</td>
<td>Acute LC₅₀ 1.6 to 7.4 mg/L</td>
<td>Fish</td>
<td>96 hours</td>
</tr>
<tr>
<td></td>
<td>-</td>
<td>Acute LC₅₀ 1.2 to 1.7 mg/L</td>
<td>Fish</td>
<td>96 hours</td>
</tr>
<tr>
<td></td>
<td>-</td>
<td>Acute LC₅₀ &gt;1 mg/L</td>
<td>Fish</td>
<td>96 hours</td>
</tr>
<tr>
<td>Nonylphenol, ethoxylated</td>
<td>-</td>
<td>Acute LC₅₀ 1.3 mg/L</td>
<td>Fish</td>
<td>96 hours</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Biodegradability</th>
<th>Test</th>
<th>Result</th>
<th>Dose</th>
<th>Inoculum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nonylphenol, ethoxylated</td>
<td>-</td>
<td>58 % - Not readily - 34 days</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>-</td>
<td>50 to 80 % - Not Readily – 42 days</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Biological Oxygen Demand: Not Determined (BOD 5 DAY)
Chemical Oxygen Demand: Not Determined (COD)

13. DISPOSAL CONSIDERATIONS

DISPOSAL: Wastes may be disposed of on-site or at an approved waste disposal facility. Triple rinse (or equivalent) adding rinse water to spray tank. Offer container for recycling or dispose of container in sanitary landfill, or by other procedures approved by appropriate authorities. Recycling decontaminated containers is the best option of container disposal. The Agricultural Container Recycling Council (ACRC) operates the national recycling program. To contact your state and local ACRC recycler, visit the ACRC web page at www.acrecycle.org. Do not contaminate water, food or feed by storage or disposal.

14. TRANSPORT INFORMATION

DOT Shipping Description: NON-BULK: NOT REGULATED BY DOT.
BULK: UN2367, CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. (TALLOW AMINE, ETHOXYLATED), 8, III, MARINE POLLUTANT (NONYLPHENOL, ETHOXYLATED)
U.S. Surface Freight Classification: ADHESIVES, ADJUVANTS, SPREADERS OR STICKERS (NMFC 4610, CLASS 60)
### 15. REGULATORY INFORMATION

<table>
<thead>
<tr>
<th>NFPA &amp; HMIS Hazard Ratings:</th>
<th>NFPA</th>
<th>HMIS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Flammability</td>
<td>1</td>
<td>1</td>
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<tr>
<td>Instability</td>
<td>0</td>
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<tr>
<td>Severe</td>
<td>4</td>
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<table>
<thead>
<tr>
<th>SARA Hazard Notification/Reporting</th>
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<tbody>
<tr>
<td>SARA Title III Hazard Category:</td>
</tr>
<tr>
<td>Immediate</td>
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<tr>
<td>Delayed</td>
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</tbody>
</table>

Reportable Quantity (RQ) under U.S. CERCLA: Not listed
SARA, Title III, Section 313: Glycol Ethers (Fraction of product meeting EPA definition) (See 50 Federal Register 13456 (April 4, 1985).
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.

### 16. OTHER INFORMATION

MSDS STATUS: New
PREPARED BY: Registrations and Regulatory Affairs
REVIEWED BY: Environmental Health and Safety

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