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: LIBERATE® WITH LECI-TECH®
CHEMICAL NAME: Lecithin, methyl esters of fatty acids, and alcohol ethoxylate
CHEMICAL FAMILY: Surfactant Mixture
CA REG. NO.: 34704-50030
WA REG. NO.: 34704-04008
MSDS Number: 8000553-12-LPI
MSDS Revisions: Sections 2, 4, 15
Date of Issue: 05/23/12
Supersedes: 07/09/10

2. HAZARDS IDENTIFICATION SUMMARY

KEEP OUT OF REACH OF CHILDREN – CAUTION – Harmful if absorbed through skin. Avoid contact with skin, eyes or clothing. Wear chemical-resistant gloves.
This product is brown liquid with a mild odor.

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>Lecithin, methyl esters of fatty acids, and</td>
<td>100.00</td>
<td>Mixture</td>
<td>none established</td>
</tr>
<tr>
<td>Alcohol ethoxylate</td>
<td></td>
<td>34398-01-1</td>
<td>none established</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

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 off contaminated clothing. Rinse skin immediately with plenty of water for 15 to 20 minutes. Call a poison control center or doctor for further 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 a 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. Call a poison control center or doctor for treatment advice.

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.
NOTE TO PHYSICIAN: Treat symptomatically.

5. FIRE FIGHTING MEASURES

FLASH POINT (°F/Test Method): >212°F / >100°C (TCC)
FLAMMABLE LIMITS (LFL & UFL): Not established
EXTINGUISHING MEDIA: Carbon dioxide (CO₂), dry chemical or water spray.
HAZARDOUS COMBUSTION PRODUCTS: None known.
SPECIAL FIRE FIGHTING PROCEDURES: Wear self-contained breathing apparatus and full protective gear.
UNUSUAL FIRE AND EXPLOSION HAZARDS: Diike area to contain run-off and prevent contamination of water supplies.

6. ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:
Wear appropriate personal protective equipment (refer to Section 8) when responding to spills. Shut off source of leak if safe to do so. Diike and contain spill. Soak up residue with absorbent such as clay, sand or other suitable material and dispose of properly. Flush area with water to remove trace residue. Contain runoff from residue flush and dispose of properly. Place in container 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: Wear impervious gloves when handling. Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Use with adequate ventilation.
STORAGE: Store in a cool, dry place. Store in original container. Keep tightly closed. Do not reuse empty container. Product will become thicker at cold temperatures. Warm product before use. Keep out of reach of children. Do not contaminate water, food or feed by storage or disposal.
8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**ENGINEERING CONTROLS:** Work in well-ventilated area. Local ventilation may be required if working in confined spaces.

**RESPIRATORY PROTECTION:** Wear a NIOSH approved respirator for pesticides if necessary.

**EYE PROTECTION:** Chemical goggles or shielded safety glasses.

**SKIN PROTECTION:** Wear long sleeved shirt, long pants, and shoes with socks. Wear impervious rubber or chemical-resistant gloves.

*For product OSHA PEL 8 hr TWA not established ACGIH TLV-TWA not established*

9. PHYSICAL AND CHEMICAL PROPERTIES

**APPEARANCE AND ODOR:** Brown liquid with mild odor

**SPECIFIC GRAVITY (Water = 1):** 0.976 g/ml

**SOLUBILITY:** Emulsifies

**BULK DENSITY:** 8.14 lbs/gal.

**PH:** 6.8 (1% solution)

**VAPOR PRESSURE:** Not established

**BOILING POINT:** Not established

**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:** None known.

**INCOMPATIBILITY:** None known.

**HAZARDOUS DECOMPOSITION PRODUCTS:** Carbon monoxide from burning.

**HAZARDOUS POLYMERIZATION:** Will not occur.

11. TOXICOLOGICAL INFORMATION

**Acute Oral LD50 (rat):** >5000 mg/kg

**Acute Dermal LD50 (rat):** >2000 mg/kg

**Eye Irritation (rabbit):** Not an irritant

**Skin Irritation (rabbit):** Moderate irritant

**Inhalation LC50 (rat):** Not established

**Skin Sensitization (guinea pig):** Not a sensitizer

**Carcinogenic Potential:** None listed by OSHA, NTP, IARC, and ACGIH as a carcinogen

12. ECOLOGICAL INFORMATION

**Aquatic Acute Toxicity**

Rainbow Trout - 96 HR LC50: 17.6 mg/L NOEC: 12.5 mg/L

Daphnia Magna - 48 HR EC50: 9.3 mg/L NOEC: 7.5 mg/L

Do not contaminate water when cleaning equipment or disposing of equipment wash waters.

13. DISPOSAL CONSIDERATIONS

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 in a 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 [http://www.acrecycle.org/](http://www.acrecycle.org/). Do not contaminate water, food or feed by storage or disposal.

14. TRANSPORT INFORMATION

**DOT Shipping Description:** NOT REGULATED BY USDOT.

**Freight Classification:** ADHESIVES, ADJUVANTS, SPREADERS OR STICKERS (NMFC 4610; CLASS: 60)

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

NFPA & HMIS Hazard Ratings:

<table>
<thead>
<tr>
<th>NFPA</th>
<th>HMIS</th>
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</thead>
<tbody>
<tr>
<td>1 Health</td>
<td>1 Health</td>
</tr>
<tr>
<td>0 Least</td>
<td>1 Slight</td>
</tr>
<tr>
<td>0 Flammability</td>
<td>0 Flammability</td>
</tr>
<tr>
<td>2 Moderate</td>
<td>0 Reactivity</td>
</tr>
<tr>
<td>3 High</td>
<td>B PPE</td>
</tr>
<tr>
<td>4 Severe</td>
<td></td>
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</tbody>
</table>

SARA Hazard Notification/Reporting

SARA Title III Hazard Category:
- Immediate: Y
- Fire: N
- Reactive: N
- Sudden Release of Pressure: N
- Delayed: N

Reportable Quantity (RQ) under U.S. CERCLA: Not listed
SARA, Title III, Section 313: Not listed
RCRA Waste Code: Not listed
CA Proposition 65: Not listed

16. OTHER INFORMATION

MSDS STATUS: Sections 2, 4 and 15 revised

PREPARED BY: Registrations and Regulatory Affairs

REVIEWED BY: Environmental/Regulatory Services

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