

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

**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:** RE-NFORCE™ KS, 15-0-12 8S  
**CHEMICAL NAME:** Potassium thiosulfate, Triazone, Urea Blend  
**CHEMICAL FAMILY:** Aqueous Organic Salt Solution  
**EPA REG. NO.:** not applicable  
**MSDS Number:** 1000176583-12-LPI    **MSDS Revisions:** All sections reviewed    **Date of Issue:** 05/08/12    **Supersedes:** 06/16/09

**2. HAZARDS IDENTIFICATION SUMMARY**

**KEEP OUT OF REACH OF CHILDREN - CAUTION** – Contact with eyes by product mist or solution may cause irritation or a burning sensation. This blended liquid fertilizer product is derived from Urea, Urea-Triazone Solution, and Potassium Thiosulfate. Prolonged or repeated skin contact with product mist or solution may cause skin irritation. Skin absorption is unlikely to occur. Ingestion of product solution may cause irritation of the gastrointestinal tract to include nausea, vomiting and diarrhea. Inhalation of product mist may cause irritation of the nose, throat, and respiratory tract. Excessive heating may cause ammonia gas to evolve.

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

**3. COMPOSITION, INFORMATION ON INGREDIENTS**

<u>Chemical Ingredients:</u>	<u>Percentage by Weight:</u>	<u>CAS No.</u>	<u>TLV (Units)</u>
Total Nitrogen (N)	15.00	Mixture	Not established
Soluble Potash (K <sub>2</sub> O)	12.00	Mixture	Not established
Sulfur (S)	8.00	Mixture	not established
Fertilizer salts and inert ingredients	65.00		

**4. FIRST AID MEASURES**

**If in eyes:** Hold eye open and rinse slowly and gently with water for 15 to 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 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 by mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.

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

**5. FIRE FIGHTING MEASURES**

**FLASH POINT (°F/Test Method):** Not applicable  
**FLAMMABLE LIMITS (LFL & UFL):** Not applicable  
**EXTINGUISHING MEDIA:** Considered non-combustible, use medium appropriate to surrounding fire. Dry chemical, carbon dioxide, foam, water spray or fog.

**HAZARDOUS COMBUSTION PRODUCTS:** Heating to dryness may cause the release of ammonia and carbon dioxide.  
**SPECIAL FIRE FIGHTING PROCEDURES:** Keep containers/storage vessels in the fire area cooled with water spray. Intense heating may cause the release of ammonia vapors. Remain upwind. Avoid breathing smoke. Wear self-contained breathing apparatus and full protective gear.

**UNUSUAL FIRE AND EXPLOSION HAZARDS:** Heating to dryness may cause the release of ammonia and carbon dioxide. This ammonia, NH<sub>3</sub>, may form flammable mixtures (16-25%) with air.

**6. ACCIDENTAL RELEASE MEASURES**

**STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:**

Small releases: Confine and absorb small release on sand, earth, or other inert absorbent. Use water spray to dilute to weak fertilizer solution and transfer to suitable containers for possible land application according to label use or for disposal. Large releases: Confine area to qualified personnel. Shut off release if safe to do so. Dike the spill area to prevent runoff into sewers, drains or surface waterways (potential aquatic toxicity). Recover as much material as possible. Treat remaining material as a small release. 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:** Avoid contact with eyes. Use only in a well-ventilated area. Wash thoroughly after handling. Avoid prolonged or repeated breathing of vapors. Avoid prolonged or repeated contact with skin.

**STORAGE:** Store in well-ventilated areas. Do not store combustibles in the area of storage vessels. Keep away from sources of heat or flame. Store totes and smaller containers out of direct sunlight at moderate temperatures [less than 105°F/40.5°C].

**8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

**ENGINEERING CONTROLS:** Use adequate exhaust ventilation to prevent inhalation of product vapors.

**RESPIRATORY PROTECTION:** None normally required. If conditions exist where mist may be generated, a NIOSH/MSHA approved mist respirator should be worn.

**EYE PROTECTION:** Chemical goggles and a full face shield. **DO NOT WEAR CONTACT LENSES.**

**SKIN PROTECTION:** Neoprene rubber gloves and apron should be worn to prevent repeated or prolonged contact with the liquid. Wash contaminated clothing prior to reuse.

<b>OSHA PEL 8 hr TWA</b>	<b>ACGIH TLV-TWA</b>
Not established	not established

**9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>APPEARANCE AND ODOR:</b> Clear liquid with slight odor	<b>BULK DENSITY:</b> 11.32 lbs./gal.	<b>SOLUBILITY:</b> Complete
<b>SPECIFIC GRAVITY (Water = 1):</b> 1.357 g/ml	<b>BOILING POINT:</b> Not established	<b>pH:</b> 9 - 11
<b>VAPOR PRESSURE:</b> Not established	<b>EVAPORATION RATE:</b> Not established	
<b>PERCENT VOLATILE (by volume):</b> Not applicable		

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:** Avoid excessive heat.

**INCOMPATIBILITY:** Strong oxidizers such as nitrates, nitrites or chlorates can cause explosive mixtures if heated to dryness. Avoid contact with acids or acid materials. This product may not be compatible with copper, zinc or their alloys (bronze, brass, galvanized materials). These materials of construction should not be used in piping, handling systems or storage containers for this product.

**HAZARDOUS DECOMPOSITION PRODUCTS:** Heating to dryness may cause the release of ammonia and carbon dioxide. This ammonia, NH<sub>3</sub>, may form flammable mixtures (16-25%) with air.

**HAZARDOUS POLYMERIZATION:** Will not occur.

**11. TOXICOLOGICAL INFORMATION**

<b>Acute Oral LD<sub>50</sub> (rat):</b> > 2500 mg/kg	<b>Acute Dermal LD<sub>50</sub> (rabbit):</b> Not established
<b>Eye Irritation (rabbit):</b> May cause irritation	<b>Skin Irritation (rabbit):</b> May cause irritation
<b>Inhalation LC<sub>50</sub> (rat):</b> Not established.	<b>Skin Sensitization (guinea pig):</b> Not established
<b>Carcinogenic Potential:</b> None listed in OSHA, NTP, IARC or ACGIH	

**12. ECOLOGICAL INFORMATION**

No data available.

**13. DISPOSAL CONSIDERATIONS**

Do not reuse container. Place in trash or offer for recycling. Incinerate contaminated solids in accordance with local, state and federal regulations.

**14. TRANSPORT INFORMATION**

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

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

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

**15. REGULATORY INFORMATION**

**NFPA & HMIS Hazard Ratings:**

NFPA		HMIS	
1	Health	0	Least
0	Flammability	1	Slight
0	Instability	2	Moderate
		3	High
		4	Severe

**SARA Hazard Notification/Reporting**

**SARA Title III Hazard Category:** Immediate Y Fire N Sudden Release of Pressure N  
 Delayed N Reactive 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:** All sections reviewed and/or revised

**PREPARED BY:** Registrations and Regulatory Affairs

**REVIEWED BY:** Environmental Health and Safety

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