



SAFETY DATA SHEET

SDS NUMBER: 1000363607-16-LPI

SDS REVISIONS: SEC. 9

DATE OF ISSUE: 08/22/16

SPRAY KICKER 5-12-5

SUPERSEDES: 08/21/15

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: **SPRAY KICKER 5-12-5**

1.2 RECOMMENDED USE:

LIQUID FERTILIZER FOR AGRICULTURAL APPLICATIONS

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

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 – Oral

Category 4

H302

Eye Damage/Irritation

Category 2A

H319

Skin Corrosion/Irritation

Category 2

H315

2.2 Label elements



Signal word:

WARNING

Hazard Statement:

H302 – Harmful if swallowed.

H319 – Causes serious eye irritation.

H315 – Causes skin irritation.

H333 – May be harmful if inhaled.

Precautionary

Statement:

P264 – Wash hands and face thoroughly after handling.

(Prevention):

P270 – Do not eat, drink or smoke when using this product.

P280 – Wear protective gloves/protective clothing/eye protection/face protection.

Precautionary

Statement:

P301+P312 – IF SWALLOWED: Call a PISON CENTER or doctor/physician if you feel unwell.

(Response):

P330 – Rinse mouth.

P302+P352 – IF ON SKIN: Wash with plenty of soap and water.

P321 – Specific treatment (see First Aid statement on the product label).

P332+P313 – If skin irritation occurs: Get medical advice/attention.

P362 – Take of contaminated clothing and wash it before reuse.

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:

(Disposal):

P501 – Dispose of contents/container in accordance with local, state and federal regulations.

2.3 Other hazards

None known



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3. COMPOSITION, INFORMATION ON INGREDIENTS

3.1 Substances

3.2 Mixtures

Classification according to 29 CFR 1910.1200

| Chemical Name: | CAS No. | Concentration [%] |
|---------------------|-----------|-------------------|
| Anhydrous Ammonia | 7664-41-7 | 1 - 4 |
| Potassium Hydroxide | 1310-58-3 | 12 - 14 |
| Phosphoric Acid | 7664-38-2 | 28 - 30 |
| Urea | 57-13-6 | 5 - 7 |
| Water | 7732-18-5 | Balance |

4. FIRST AID MEASURES

4.1 Description of First Aid Measures

General Advice: Get medical attention if symptoms occur.

Eye contact:

Begin eye irrigation immediately. All eye exposures to aqua ammonia require medical evaluation following decontamination. Immediately rinse eyes with large quantities of water or saline for a minimum of 20-60 minutes depending on severity of exposure. If possible, remove contact lenses being careful not to cause additional eye damage. If the initial water supply is insufficient, keep the affected area wet with a moist cloth and transfer the person to the nearest place where rinsing can be continued for the recommended length of time. Call an ambulance for transport to hospital. Continue eye irrigation during transport. For additional advice call the medical emergency number on this safety data sheet or your poison center or doctor.

Inhalation:

If gases or vapors exceed the IDLH or are present in unknown concentrations, rescuers must wear self-contained breathing apparatus and a suit resistant to gases (Level B). In the U.S., OSHA Hazwoper requirements under 29CFR1910.120 overrule the lesser protection requirements given in the anhydrous ammonia standard, 1910.111. REMOVE PERSON TO FRESH AIR. Watch closely for signs of wheezing and breathing difficulties. Maintain an open airway. If not breathing, begin CPR. Oxygen may be administered by trained personnel. Affected persons who have stopped breathing or are having difficulty breathing or are unconscious need immediate medical attention. Symptoms may be delayed after exposure to ammonia. The exposed person may need to be kept under medical surveillance for 24 - 48 hours. Call an ambulance for transport to hospital. For additional advice call the medical emergency number on this SDS or your poison center or doctor.

Skin contact:

Causes severe burns. Immediately begin rinsing the affected areas with water. Remove contaminated clothing and shoes. Affected areas should be rinsed for a minimum of 20 - 60 minutes or longer depending on severity of exposure. Luke-warm water is recommended for continued irrigation to prevent hypothermia. Conscious persons without breathing difficulties may benefit from prolonged irrigation in a fixed shower or bathing facility prior to hospital transport. Call an ambulance for transport to hospital. Continue skin irrigation during transport. For additional advice call the medical emergency number on this safety data sheet or your poison center or doctor.

Ingestion:

May cause severe burns to the mouth, throat, and stomach. If the affected person requires cardiopulmonary resuscitation, avoid mouth to mouth contact. Do not induce vomiting. If vomiting occurs, attempt to keep head lower than the chest so that vomit does not enter the lungs. Wash face and mouth with water to remove visible material. If the exposed person is conscious and can swallow, give 1-2 sips of water. Do not give anything else by mouth. Loosen tight clothing such as collar, tie, belt or waistband to prevent any breathing restrictions. For signs of breathing difficulties, refer to the INHALATION section. Call an ambulance for transportation to hospital. For additional advice, call the medical emergency number on this safety data sheet or your poison center or doctor.

4.2 Most Important Symptoms and Effects, Acute and Delayed

Symptoms:

Eyes: Irritating to eyes on contact. Causes serious eye irritation. Eye contact can result in temporary or permanent corneal damage and/or blindness. The full extent of damage to the eyes may not be known for 1 week after injury.

Inhalation: May be harmful if inhaled. Corrosive to the respiratory system. May cause severe breathing difficulties.

Skin: Causes skin irritation.

Ingestion: May be harmful if swallowed. May cause respiratory irritation.



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4.3 Immediate Medical Attention and Special Treatment

Treatment: Corrosive hydroxyl ions generated by the production of ammonium hydroxide rapidly penetrate the skin, eyes, and mucous membranes. Outcomes can be improved by minimizing time to decontaminate and extending decontamination times to reduce tissue damage. Expert opinion indicates extended decontamination is required to remove corrosive chemicals. Skin and eye decontamination should be performed for a minimum of 20 - 60 minutes. Extended decontamination times may be required depending on the exposure. To avoid hypothermia, irrigation water should be maintained at a comfortable temperature. If the patient is not in extremis, it may be necessary to delay transport to emergency care facilities to ensure adequate decontamination time. However, early patient transport may be necessary depending on patient's condition or the availability of water. If possible, continue skin and/or eye irrigation during emergency medical transport. Double-bag contaminated clothing and personal belongings of the patient.

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: This product consists of ammonia gas dissolved in water. A portion will convert to ammonium hydroxide. Ammonium hydroxide will rapidly penetrate the stratum corneum layer, eyes, and mucous membranes causing liquefaction necrosis. The extent of injury depends on duration of exposure and concentration of liquid. Do not attempt to use chemicals to neutralize the exposure. Inhalation of gas or vapor may cause delayed pulmonary symptoms (acute lung injury).

5. FIRE FIGHTING MEASURES

5.1 EXTINGUISHING MEDIA:

Suitable Extinguishing Media: Non-flammable. Material will not burn. Flammable concentrations of vapor may accumulate in the headspace of containers. In case of fire, use water spray.

5.2 SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE:

Specific Hazards During Firefighting: In a fire or if heated, a pressure increase will occur and the container may burst. Apply water from a safe distance to cool container and protect surrounding area.

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: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

6.2 ENVIRONMENTAL PRECAUTIONS

Environmental Precautions: Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

6.3 METHODS AND MATERIALS FOR CONTAINMENT AND CLEAN-UP

Methods for Clean-Up: Large Spills: Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Small Spills: Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.



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7. HANDLING AND STORAGE

7.1 PRECAUTIONS FOR SAFE HANDLING:

Advice on Safe Handling: Put on appropriate personal protective equipment (see Section 8). Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Keep away from acids. Empty containers retain product residue and can be hazardous.

7.2 CONDITIONS FOR SAFE STORAGE:

Requirements for Storage Areas and Containers: Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Separate from acids. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 CONTROL PARAMETERS:

OCCUPATIONAL EXPOSURE LIMITS

U.S. Workplace Exposure Level (ACGIH) TLVs

| Components | Type | Value |
|------------|------|----------------------|
| Ammonia | TWA | 17 mg/m ³ |
| Ammonia | TWA | 25 ppm |

U.S. Workplace Exposure Level (OSHA) PELs

| Components | Type | Value |
|------------|------|----------------------|
| Ammonia | TWA | 35 mg/m ³ |
| Ammonia | TWA | 50 ppm |

Biological limit values

ACGIH Biological Exposure Indices

| Components | Value | Specimen |
|-------------|-------|----------|
| No listings | | |

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: Coveralls worn over long-sleeved shirt and long pants. Chemical-resistant gloves. Chemical-resistant footwear plus socks.

Respiratory Protection: In case of inadequate ventilation or risk of inhalation of mists or vapors, use suitable respiratory equipment such as NIOSH approved air-purifying half-mask respirator with cartridges providing protection against ammonia. 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.



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9. PHYSICAL AND CHEMICAL PROPERTIES

| | |
|---|----------------------------------|
| 9.1 APPEARANCE : | Liquid |
| ODOR: | Slight ammoniacal. |
| ODOR THRESHOLD: | 17 ppm. |
| COLOR: | Clear, colorless. |
| pH: | 6.3 |
| MELTING POINT / FREEZING POINT: | Freezing Point < -8.9°C (< 16°F) |
| BOILING POINT: | 101°C (214°F) |
| FLASH POINT: | Not flammable |
| 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, dynamic: | No data available |
| SPECIFIC GRAVITY (Water = 1): | 1.198 g/ml |
| DENSITY: | 10.00 lbs./gal / 1.2 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

Reactive with acids.

10.2 CHEMICAL STABILITY

Stable under normal temperature conditions

10.3 POSSIBILITY OF HAZARDOUS REACTIONS

Under normal conditions of storage and use, hazardous reactions will not occur. Will not polymerize.

10.4 CONDITIONS TO AVOID

Flammable concentrations of vapor may accumulate in the headspace of containers. Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.

10.5 INCOMPATIBLE MATERIALS

Incompatible with halogens, hydrogen peroxide, chlorinated hydrocarbons, fluorine, nitric acid, oxidizing agents and sulfuric acid.

10.6 HAZARDOUS DECOMPOSITION PRODUCTS

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

11 TOXICOLOGICAL INFORMATION

11.3 LIKELY ROUTES OF EXPOSURE

Eye contact. Skin contact. Inhalation.

LC₅₀ (rat): 2,000 ppm (4 HR) Ammonia

LD₅₀ Oral (rat): 350 mg/kg

LD₅₀ Dermal (rat): No data available

Acute Toxicity Estimates: No data available

Skin Irritation (rabbit): May cause skin irritation.

Eye Irritation (rabbit): Irritating to the eyes.

Specific Target Organ Toxicity: Severely irritating to the respiratory system.

Aspiration: No data available

Skin Sensitization (guinea pig): Not a sensitizer

Carcinogenicity: No data available

Germ Cell Mutagenicity: No data available

Interactive Effects: None known



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12 ECOLOGICAL INFORMATION

12.3 ECOTOXICITY

The product is harmful to aquatic life. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment. This product is not intended for use in aquatic settings.

Ecotoxicological Data

| | Species | Test Results |
|--------------------------|------------------|------------------------------------|
| Product | | |
| 96-hour LC ₅₀ | Gambusia affinis | 37 ppm (Ammonia, aqueous solution) |
| 48-hour EC ₅₀ | Daphnia Magna | 0.53 ppm (Ammonia) |

- 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.

13 DISPOSAL CONSIDERATIONS

13.1 WASTE TREATMENT METHODS

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>. Do not contaminate water, food or feed by storage or disposal.

14 TRANSPORT INFORMATION

14.3 LAND TRANSPORT

DOT Shipping Description: NOT REGULATED

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

15 REGULATORY INFORMATION

15.1 SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS

NFPA & HMIS Hazard Ratings:

NFPA

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

HMIS

- 2 Health
- 0 Flammability
- 0 Reactivity
- B PPE



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SARA Hazard Notification/Reporting

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

Reportable Quantity (RQ) under U.S. CERCLA: Ammonia (CAS: 7664-41-7) 1,000 lbs.

SARA, Title III, Section 313: Ammonia (CAS: 7664-41-7)

RCRA Waste Code: Not listed

CA Proposition 65: Not applicable

16 OTHER INFORMATION

SDS STATUS: Section 9 revised.

PREPARED BY: Registrations and Regulatory Affairs

REVIEWED BY: Environmental Health and Safety

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