

SAFETY DATA SHEET

SDS NUMBER: 1000592569-14-LPI

SDS REVISIONS: NEW

DATE OF ISSUE: 08/21/14

BLACKJACK™ FE

SUPERSEDES: NEW

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:** BLACKJACK™ FE 4.5% IRON 4-0-0**1.2 RECOMMENDED USE:** LIQUID MICRONUTRIENT**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**

| | | |
|-------------------------|-------------|------|
| Eye Irritation | Category 2B | H320 |
| Acute Toxicity (Dermal) | Category 5 | H313 |
| Acute Toxicity (Oral) | Category 5 | H302 |

2.2 Label elements

Signal word: WARNING
 Hazard Statement: H320 – Causes eye irritation.
 H313 – May be harmful in contact with skin.
 H302 – Harmful if swallowed

Precautionary
 Statement:

P261 – Avoid breathing dust / fume / gas / mist / vapors / spray
 P273 - Avoid release to the environment

(Prevention):

P280 - Wear protective gloves and eye / face protection

Precautionary

P337 + P313 – If eye irritation persists: get medical attention

Statement:

P305 + P351 + P338 – IF IN EYES: Rinse with water for 15 to 20 minutes. Remove contact lenses, if present, and continue rinsing eyes.

(Response):

P302 + P352 – IF ON SKIN: Wash with plenty of water for 15 to 20 minutes

Precautionary

Statement:

(General):

P101 + P102 + P103 – If medical advice is needed, have product container or label available. Keep out of reach of children. Read label before use

2.3 Other hazards

None known

KEEP OUT OF REACH OF CHILDREN –

Appearance and odor: Black liquid with slight ammonia odor.

WARNING – CATEGORY 2B CAUSES EYE IRRITATION, CATEGORY 5 MAY BE HARMFUL IN CONTACT WITH SKIN, CATEGORY 5 HARMFUL IF SWALLOWED**Potential Health effects**

Routes of exposure Eye contact, skin contact, inhalation. Avoid breathing spray mist.

Eyes Causes eye irritation.

Skin Can cause skin irritation.

Inhalation May be irritating to respiratory system.

Ingestion May be irritating to mouth, throat, and stomach.

Target organs

Eyes. Skin. Inhalation.

Signs and symptoms

May be harmful if swallowed, absorbed through skin or inhaled.

Potential environmental effects

This product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have harmful or damaging effect on the environment.

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3. COMPOSITION, INFORMATION ON INGREDIENTS

3.1 Substances

Classification according to 29 CFR 1910.1200

3.2 Mixtures

| Chemical Name: | CAS No. | Classification | Concentration [%] |
|-------------------|-----------|---------------------------|-------------------|
| Ferrous Sulfate | 7720-78-7 | H320, 2B, Eye irritation. | varies |
| Anhydrous Ammonia | 7664-41-7 | | varies |
| 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:** 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.
- Ingestion:** 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.
- Skin contact:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.
- Inhalation:** Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferable by mouth-to-mouth, if possible. Call a poison control center or doctor for treatment advice.

4.2 Most Important Symptoms and Effects, Acute and Delayed

Symptoms: Eye irritation.

4.3 Immediate Medical Attention and Special Treatment

Treatment: Treat symptomatically. Symptoms may be delayed.

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: No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

5. FIRE FIGHTING MEASURES

5.1 EXTINGUISHING MEDIA:Suitable Extinguishing Media: Foam, carbon dioxide (CO₂), dry powder, water spray. Do not use water jet as this will spread the fire.**5.2 SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE:**

Specific Hazards During Firefighting: During a fire, oxides of carbon and silicon dioxide can be released.

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 vapors, dusts and spray mist and contact with skin and eyes. Ensure adequate ventilation. Wear suitable protective clothing.

6.2 ENVIRONMENTAL PRECAUTIONS

Environmental Precautions: Prevent further leakage or spillage if safe to do so. Do not contaminate water. Do not allow to enter drains, sewers, or watercourses.

6.3 METHODS AND MATERIALS FOR CONTAINMENT AND CLEAN-UPMethods for Clean-Up: Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. After removal flush contaminated area thoroughly with water.
Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to Remove residual contamination.
Never return spills to original containers for re-use.

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7. HANDLING AND STORAGE**7.1 PRECAUTIONS FOR SAFE HANDLING:**

Advice on Safe Handling:

Avoid inhalation of dusts, vapors / spray and contact with eyes, skin and clothing. Do not breathe dusts, mist or vapor. Wear personal protective equipment. Do not use in areas without adequate ventilation. Avoid prolonged exposure. Wash thoroughly after handling. Do not empty into drains. Handle and open container with care. Use care in handling/storage. Wash before eating, drinking and/or smoking.

7.2 CONDITIONS FOR SAFE STORAGE:

Requirements for Storage Areas and Containers:

Store above 40°F (4.4°C). Store in original containers only. Keep containers tightly closed when not in use. Store in a cool, dry well-ventilated area, preferably in a locked storage area away from children, feed and food products and seed. Do not contaminate water, food or feed by storage or disposal.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION**8.1 CONTROL PARAMETERS:****OCCUPATIONAL EXPOSURE LIMITS****U.S. Workplace Exposure Level (OSHA) PELs**

| Components | Type | Value |
|---------------------------|---------------|----------------------|
| Ammonia | TWA | 35 mg/m ³ |
| (ACGIH® TLVs®) | STEL/CEIL (C) | 24 mg/m ³ |
| Iron salts, soluble as Fe | TWA | 1 mg/m ³ |

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:

Chemical resistant clothing is recommended. Routinely wash work clothing and protective equipment to remove contaminants. The use of chemical-resistant gloves is recommended when handling undiluted product. Be aware that the liquid may penetrate the gloves. Frequent change is advisable.

Respiratory Protection:

In case of inadequate ventilation or risk of inhalation of dusts or vapors, use suitable respiratory equipment such as MSHA/NIOSH TC-21C or NIOSH approved respirator with N, R, P or HE filter. 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: | Slight ammonia. |
| ODOR THRESHOLD: | No data available. |
| COLOR: | Black. |
| pH: | 6.6 – 6.9 |
| MELTING POINT / FREEZING POINT: | No data available |
| BOILING POINT: | No data available |
| FLASH POINT: | >212°F / 100°C (Tag CC) |
| 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): | 1.258 g/ml |
| BULK DENSITY: | 10.50 lbs./gal / 1.26 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.

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10. STABILITY AND REACTIVITY**10.1 REACTIVITY**

Stable

10.2 CHEMICAL STABILITY

Stable under normal temperature conditions

10.3 POSSIBILITY OF HAZARDOUS REACTIONS

No reactions known under normal use conditions. 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**11.1 LIKELY ROUTES OF EXPOSURE**

Eye contact, skin contact.

LC₅₀ (rat) No data available for product**LD₅₀ Oral (rat):** 1,520 mg/kg (Ferrous Sulfate)**LD₅₀ Dermal (rat):** No data available for product**Acute Toxicity Estimates:** No data available for product**Skin Irritation (rabbit):** No data available for product**Eye Irritation (rabbit):** No data available for product**Specific Target Organ Toxicity:** Single exposure: No data available for product.**Aspiration:** No data available for product**Skin Sensitization (guinea pig):** Not a sensitizer**Carcinogenicity:** No data available for product**Germ Cell Mutagenicity:** No data available for product**Interactive Effects:** None known**12. ECOLOGICAL INFORMATION****12.1 ECOTOXICITY**

The product is not classified as environmentally hazardous. 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

| Components | | Species | Test Results |
|------------------------------------|------------------|---------------|---|
| Anhydrous Ammonia (CAS: 7664-41-7) | | | |
| Aquatic | | | |
| Crustacea | EC ₅₀ | Daphnia magna | 2.9 mg/l un-ionized ammonia, 48 hours |
| | NOEC | Daphnia magna | 0.163 – 0.42 mg/l un-ionized ammonia 21d-76wk |
| Fish | LC ₅₀ | Fish, various | 0.09 - 3.51 mg/l un-ionized ammonia, 96 hours |
| | NOEC | Fish, various | 0.025 – 1.2 mg/l un-ionized ammonia 12d-5yr |

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.

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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**14.1 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

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

HMIS

| |
|----------------|
| 1 Health |
| 0 Flammability |
| 0 Reactivity |
| B PPE |

SARA Hazard Notification/Reporting

| | | | | | | |
|--|-----------|----------|----------|----------|----------------------------|----------|
| SARA Title III Hazard Category: | Immediate | <u>Y</u> | Fire | <u>N</u> | Sudden Release of Pressure | <u>N</u> |
| | Delayed | <u>N</u> | Reactive | <u>N</u> | | |

Reportable Quantity (RQ) under U.S. CERCLA: Ammonia (CAS: 7664-41-7) 100 lbs.; Ferrous Sulfate (CAS: 7720-78-7) 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: New

PREPARED BY: Registrations and Regulatory Affairs

REVIEWED BY: Environmental Health and Safety

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