



SAFETY DATA SHEET

SDS REVISIONS: ALL SECTIONS DATE OF ISSUE: 02/26/2018

FEATURE 12-0-0

SUPERSEDES: 06/19/2012

1. PRODUCT AND COMPANY IDENTIFICATION

Product identifier

Product Name FEATURE 12-0-0

Other means of identification

Product Code FRT-0061
Document 1000043986
Synonyms None

Recommended use of the chemical and restrictions on use

Recommended Use Chelated. Foliar Nutrient.
Uses advised against No information available

Details of the supplier of the safety data sheet

Manufacturer Address
LOVELAND PRODUCTS, INC.
P.O. Box 1286
Greeley, CO 80632-1286

Emergency telephone number

Company Phone Number 1-888-LPI-CUST (574-2878)
Emergency Telephone Chemtrec 1-800-424-9300
Medical Emergencies: 1-866-944-8565
US regulations require reporting spills of this material that could reach any surface waters.
The toll-free phone number for the US Coast Guard National Response Center is
1-800-424-8802

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute toxicity - Oral	Category 4 - (H302)
Skin corrosion/irritation	Category 2 - (H315)
Serious eye damage/eye irritation	Category 2 - (H319)

Label elements



Signal word

WARNING

Hazard statements

H302 - Harmful if swallowed
H315 - Causes skin irritation
H319 - Causes serious eye irritation

Precautionary Statements -

P264 - Wash face, hands and any exposed skin thoroughly after handling



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Prevention

P270 - Do not eat, drink or smoke when using this product
P280 - Wear protective gloves/protective clothing/eye protection/face protection

Precautionary Statements - Response

P301 + P312 - IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
P302 + P352 - IF ON SKIN: Wash with plenty of soap and water
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P330 - Rinse mouth
P332 + P313 - If skin irritation occurs: Get medical advice/attention
P337 + P313 - If eye irritation persists: Get medical advice/attention
P362 - Take off contaminated clothing and wash before reuse

Precautionary Statements - Disposal

P501 - Dispose of contents/ container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

Not applicable

3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixture

Chemical Name	CAS No	Weight-%	Trade Secret
Ferrous Sulfate	7720-78-7	15 - 40	*
Manganese Sulfate	10034-96-5	1 - 5	*

If CAS number is "proprietary", the specific chemical identity and percentage of composition has been withheld as a trade secret.

OSHA Hazard Communication 29 CFR 1910.1200



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4. FIRST AID MEASURES

Description of first aid measures

General advice	Get medical attention if symptoms occur.
Eye contact	Hold eyelids apart and flush eyes with plenty of water for at least 15 minutes. Get medical attention. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.
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	Remove 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.
Ingestion	Call a poison control center or doctor for treatment advice. Have person sip a glass of water if able to swallow. Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person.
Self-protection of the first aider	Use personal protective equipment as required.

Most important symptoms and effects, both acute and delayed

Symptoms	No information available.
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Indication of any immediate medical attention and special treatment needed

Treatment:	Treat symptomatically. Symptoms may be delayed. Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also call 1-866-944-8565 for emergency medical treatment information.
Note to physicians	No specific antidote. Treat symptomatically.
Antidotes	No data available

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

Use extinguishing agent suitable for type of surrounding fire, Use CO₂, dry chemical, or foam

Explosion data

Sensitivity to Mechanical Impact None.

Sensitivity to Static Discharge None.

Protective equipment and precautions 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.



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6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

Environmental precautions

Environmental precautions Prevent entry into waterways, sewers, basements or confined areas. Do not flush into surface water or sanitary sewer system. Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. See Section 12 for additional ecological information.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Cover liquid spill with sand, earth or other non-combustible absorbent material. Cover powder spill with plastic sheet or tarp to minimize spreading. Pick up and transfer to properly labeled containers. Soak up with inert absorbent material. Dam up.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Avoid contact with skin, eyes or clothing. Use personal protective equipment as required. Wash contaminated clothing before reuse. Do not breathe dust/fume/gas/mist/vapors/spray. Do not eat, drink or smoke when using this product. Use with local exhaust ventilation.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep container tightly closed in a dry and well-ventilated place. Keep out of the reach of children. Keep containers tightly closed in a cool, well-ventilated place. Keep in properly labeled containers.

Incompatible materials None known based on information supplied.



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8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

Appropriate engineering controls

Engineering Controls

Showers
Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection

Tight sealing safety goggles. Face protection shield.

Skin and body protection

Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

Respiratory protection

In case of insufficient ventilation, wear suitable respiratory equipment.

General Hygiene Considerations

When using do not eat, drink or smoke. Regular cleaning of equipment, work area and clothing is recommended.



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9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	Liquid
Appearance	Clear liquid
Color	Dark brown
Odor	Characteristic
Odor threshold	No data available

Property	Values (Remarks - Method)	
pH	No data available	
Melting point / freezing point	No data available	No data available
Boiling point	No data available	No data available
Flash point	No data available	No information available
Evaporation rate	No data available	No data available
Flammability (solid, gas)	No data available	No information available
Flammability Limit in Air	Not applicable	
Upper flammability limit:	No data available	
Lower flammability limit:	No data available	
Vapor pressure	No data available	No data available
Vapor density	No data available	No data available
Specific Gravity	1.33 g/ml	
Water solubility	No data available	Soluble in water
Solubility in other solvents	No data available	
Partition coefficient	No data available	No data available
Autoignition temperature	No data available	Not applicable
Decomposition temperature	No data available	No data available
Kinematic viscosity	No data available	
Dynamic viscosity	No data available	
Explosive properties	No data available	
Oxidizing properties	No data available	

Other Information

VOC Content (%)	No data available
Density	11.1lbs/gal

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

Reactivity

No data available

Chemical stability

Stable under recommended storage conditions.

Possibility of Hazardous Reactions

None under normal processing.

Conditions to avoid

Extremes of temperature and direct sunlight.

Incompatible materials

None known based on information supplied.

Hazardous Decomposition Products

None known based on information supplied.

11. TOXICOLOGICAL INFORMATION

Acute toxicity of the formulated product: > 5000 mg/kg > 5000 mg/kg

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Germ cell mutagenicity

No information available.

Carcinogenicity

No information available.

Reproductive toxicity

No information available.

STOT - single exposure

No information available.

STOT - repeated exposure

No information available.

Chronic toxicity

Avoid repeated exposure. May cause adverse effects on the bone marrow and blood-forming system. May cause adverse liver effects.

Target Organ Effects

blood, Central nervous system, Eye damage/irritation, Gastrointestinal tract (GI), kidney, liver, Respiratory system, Skin.

Aspiration hazard

No information available.

Information on likely routes of exposure

Product Information

No data available

Inhalation

No data available.

Eye contact

No data available.

Skin contact

No data available.

Ingestion

No data available.



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12. ECOLOGICAL INFORMATION

Ecotoxicity

Persistence and degradability

No information available.

Bioaccumulation

No information available.

Other adverse effects

No information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal of wastes

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.

Contaminated packaging

Do not reuse container.

14. TRANSPORT INFORMATION

DOT

UN/ID no

Not regulated

Proper shipping name

Not regulated

U.S. Surface Freight Classification:

FERTILIZING COMPOUNDS (MANUFACTURED FERTILIZERS), NOI, LIQUID (NMFC 68140, SUB 6; CLASS 70)



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15. REGULATORY INFORMATION

NFPA	Health hazards 0	Flammability 0	Instability 0	Physical and Chemical Properties -
HMIS	Health hazards 0	Flammability 0	Physical hazards 0	Personal protection B
	0 - Least	1 - Slight	2 - Moderate	3 - High
				4 - Severe

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	SARA 313 - Threshold Values %
Manganese Sulfate - 10034-96-5	1.0

SARA 311/312 Hazard Categories

Acute health hazard	Yes
Chronic Health Hazard	No
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

CWA (Clean Water Act)

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Ferrous Sulfate 7720-78-7	1000 lb	-	-	X

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Chemical Name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Ferrous Sulfate 7720-78-7	1000 lb	-	RQ 1000 lb final RQ RQ 454 kg final RQ

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals

U.S. EPA Label Information



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16. OTHER INFORMATION

Prepared By Registrations and Regulatory Affairs

Reviewed By Environmental Health and Safety

Issue Date 02/26/2018

Revision Date 02/26/2018

Revision Note

16 SDS sections updated

FEATURE 12-0-0 is a registered trademark of Loveland Products, Inc.

Disclaimer

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End of Safety Data Sheet