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

IDENTIFICATION OF THE MATERIAL AND SUPPLIER 1.

- **PRODUCT IDENTIFIER:** 1.1 TRADE NAME: N-PHURIC® 15/49 15-0-0 16S
- 1.2 RECOMMENDED USE: FERTILIZER
- 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

HAZARDS IDENTIFICATION 2.

2.1 Classification of the substance or mixture

Classification according to 29	CFR 1910.1200
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Eye Irritation	Category 1	H318
Skin Corrosion / Irritation	Category 1B	H314
Acute Toxicity (Oral)	Category 5	H335

2.2 Label elements



	-	
	Signal word: Hazard Statement:	DANGER H314 – Causes serious eye damage.
		H314 – Causes severe skin burns and eye damage.
		H335 – May cause respiratory irritation. H333 – May be harmful if inhaled.
		H303 – May be harmful if swallowed.
	Precautionary	
	Statement:	P260 – Do not breathe mist / vapors / spray.
		P264 - Wash thoroughly after handling.
	(Prevention):	P271 – Use only outdoors or in a well-ventilated area.
		P273 – Avoid release to the environment.
		P280 – Wear protective gloves / eye protection / face protection.
	Precautionary	
	Statement: (Response):	P301+P330+P331 – IF SWALLOWED: Rinse mouth. DO NOT induce vomiting. P303+P361+P353 - IF ON SKIN: Remove / Take off immediately all contaminated clothing. Rinse skin with water / shower.
	(Response).	P303+P301+P303 - IF ON SKIN. Remove / Take on infinediately an containinated clothing. Rinse skin with water / shower. P304+P312 – IF INHALED: Call a POISON CENTER or doctor / physician if you feel unwell.
		P305+P351+P338: IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and
		easy to do - continue rinsing.
		P310 – Immediately call a POISON CENTER or doctor / physician.
		P340 – Remove victim to fresh air and keep at rest in a position comfortable for breathing.
		P363 – Wash contaminated clothing before reuse.
	D <i>i</i>	P391 – Collect spillage.
	Precautionary	
	Statement: (Storage):	P403+P233 – Store in a well-ventilated place. Keep container tightly closed.
	(Storage).	P405 – Store locked up.
23	Other hazards	
	None known	
KEE	P OUT OF REACH OF	CHILDREN –
	earance and odor: Light	purple liquid with no odor.
Pote	ential Health effects	
	Routes of exposure	Eye contact, skin contact, inhalation. Avoid breathing spray mist.
	Eyes	Causes serious eye damage.
	Skin	Causes severe skin burns.
	Inhalation	May be harmful if inhaled.
	Ingestion	May be harmful if swallowed.

Skin. Eyes. Inhalation. Target organs Signs and symptoms May be harmful if absorbed through skin.

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.

3. COMPOSITION, INFORMATION ON INGREDIENTS

3.1 Substances

3.2 Mixtures

Classification according to 29 CFR 1910.1200

Chemical Name:	CAS No.	Classification	Concentration
Monocarbamide dihydrogen sulfate	21351-39-3	Skin Corr. 1B; H314	[%] 100.00
		Eye Dam. 1; H318	
		STOT SE: H335	

4. FIRST AID MEASURES

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.
Skin contact:	Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center doctor for treatment advice.
ngestion:	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 centre or doctor. Do not give anything by mou to an unconscious person.
nhalation:	Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferable t mouth-to-mouth, if possible. Call a poison control center or doctor for treatment advice.
	mptoms and Effects, Acute and Delayed
4.2 Most Important Sy Symptoms:	Inhalation: May cause respiratory irritation. Eyes: Causes serious eye damage.
Symptoms:	Inhalation: May cause respiratory irritation.
Symptoms: 1.3 Immediate Medical Treatment: Treat	Inhalation: May cause respiratory irritation. Eyes: Causes serious eye damage. Skin: Causes severe skin burns and eye damage. Attention and Special Treatment t symptomatically. Symptoms may be delayed.
Symptoms: 4.3 Immediate Medical Treatment: Treat	Inhalation: May cause respiratory irritation. Eyes: Causes serious eye damage. Skin: Causes severe skin burns and eye damage. Attention and Special Treatment
Symptoms: 4.3 Immediate Medical Treatment: Treat Notes to Physician:	Inhalation: May cause respiratory irritation. Eyes: Causes serious eye damage. Skin: Causes severe skin burns and eye damage. Attention and Special Treatment t 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.
Symptoms: 4.3 Immediate Medical Treatment: Treat Notes to Physician:	Inhalation: May cause respiratory irritation. Eyes: Causes serious eye damage. Skin: Causes severe skin burns and eye damage. Attention and Special Treatment t 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. Probable mucosal damage may contraindicate the use of gastric lavage. No specific antidote. Treatment of exposure Id be directed at the control of symptoms and the clinical condition of the patient.

		this will spread the fire.
5.2	SPECIAL HAZARDS ARISING FROM THE S	UBSTANCE OR MIXTURE:
	Specific Hazards During Firefighting:	During a fire, hazardous by-products can be released.
5.3	SPECIAL PROTECTIVE EQUIPMENT AND F	PRECAUTIONS FOR FIREFIGHTERS
	Special Protective Equipment for Firefighters:	Self-contained breathing apparatus and full protective gear should be worn in fighting large fi
	· · · ·	

s: 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 and spray mist and contact with skin and eyes. Ensure adequate v 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	6.3 METHODS AND MATERIALS FOR CONTAINMENT AND CLEAN-UP		
	Methods 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.	
7.	HANDLING AND STORAGE		
7.	1 PRECAUTIONS FOR SAFE HANDLING: Advice on Safe Handling:	Avoid inhalation of mists, vapors / spray and contact with eyes, skin and clothing. Do not breathe mists 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 in cool, dry place. Store in original container. Keep tightly closed. Do not reuse empty container. Product will become thicker at cold temperatures but effectiveness will not be affected. Warm product before use. 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 (ACGIH) TLVs Components Type Value No data available TWA U.S. Workplace Exposure Level (OSHA) PELs Components Value Type No data available TWA **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.
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
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:	Odorless.
	ODOR THRESHOLD:	No data available.
	COLOR:	Light purple.
	pH:	1.0 (10% solution)
	MELTING POINT / FREEZING	G POINT: No data available
	BOILING POINT:	212 [°] F (100 [°] C) (Decomposes at 230°F)
	FLASH POINT:	Does not flash
	FLAMMABILILITY (solid, gas):	No data available.
	UPPER / LOWER FLAMMABI	LITY OR EXPLOSIVE LIMITS: No data available.
	VAPOR PRESSURE:	No data available.
	SOLUBILITY:	Soluble
	PARTITION CO-EFFICIENT, r	n-OCTANOL / WATER: No data available.
	AUTO-IGNITION TEMPERAT	URE: No data available.
	DECOMPOSITION TEMPERA	ATURE: No data available
	VISCOSITY, dynamic:	No data available
	SPECIFIC GRAVITY (Water =	: 1): 1.51 g/ml
	BULK DENSITY:	12.60 lbs./gal / 1.51 kg/L
Note:	These physical data are ty	pical 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

Stable

10.2 CHEMICAL STABILITY

- Stable under normal temperature conditions
- **10.3 POSSIBILITY OF HAZARDOUS REACTIONS**

Corrosive to 304 stainless steel. Slightly corrosive to 316 stainless steel. Will not polymerize.

10.4 CONDITIONS TO AVOID

Avoid contact with hypochlorites, sulfides, or alkaline materials. Avoid storage, piping, or handling systems made of copper, zinc, or their alloys (bronze, brass, galvanized metals, etc.).

10.5 INCOMPATIBILE MATERIALS

Hypochlorites, sulfides, or alkaline materials. Incompatible with nylon and nylon beads.

10.6 HAZARDOUS DECOMPOSITION PRODUCTS

Heating to dryness may cause the release of carbon dioxide gas.

11 TOXICOLOGICAL INFORMATION

11.3 LIKELY ROUTES OF EXPOSURE

Eye contact. Skin contact. LC₅₀ (rat): No data available. LD₅₀ Oral (rat): 350 mg/kg LD₅₀ Dermal (rat): >2,000 mg/kg Acute Toxicity Estimates: No data available. Skin Irritation (rabbit): May be corrosive to skin. Eye Irritation (rabbit): Corrosive. Specific Target Organ Toxicity: Single exposure: No data available. 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

Test Results

12 ECOLOGICAL INFORMATION

12.3 ECOTOXICITY

A toxic hazard to fish. Avoid spills or release to watercourses. 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.

Species

Ecotoxicological Data

Product

No data available.

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: UN1760, CORROSIVE LIQUIDs, N.O.S. (MONOCARBAMIDE DIHYDROGENSULFATE), 8, III ERG GUIDE 154

NOTE: DOT CORROSIVE TO ALUMINUM AND STEEL. NOT REGULATED BY DOT IF TRANSPORTED BY MOTOR VEHICLE OR RAILCAR IN PACKAGING THAT WILL NOT REACT DANGEROUSLY OR BE DEGRADED BY THIS MATERIAL, 49CFR 173.154(D)

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

0

- 3 Health0 Flammability
 - Instability
 - nstability
- 3 High4 Severe

Slight

Moderate

0 Least

1

2

HMIS

- 3 Health
- 0 Flammability 0 Reactivity
- B PPE

SDS NUMBER: 1000355883-15-LPI **DATE OF ISSUE: 02/25/15** SDS REVISIONS: FORMAT **SUPERSEDES: 08/06/14** SARA Hazard Notification/Reporting

SARA Title III Hazard Category:

SAFETY DATA SHEET

Immediate Delayed Ν Fire Reactive

Ν

Sudden Release of Pressure ___N___

N-PHURIC® 15/49

Reportable Quantity (RQ) under U.S. CERCLA: Not listed SARA, Title III, Section 313: Not listed

RCRA Waste Code: Not listed

CA Proposition 65: WARNING: This product contains chemicals known to the State of California to cause cancer or birth defects or other reproductive harm.

16 OTHER INFORMATION

SDS STATUS: Format revised.

PREPARED BY: Registrations and Regulatory Affairs

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REVIEWED BY: Environmental Health and Safety

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