

MATERIAL SAFETY DATA SHEET

N-pHURIC GTO®

Page 1 of 4

Issue Date: 10/01

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Chemical Product

N-pHURIC GTO®

Common Name: MCDS solution.
Chemical Description: Monocarbamide dihydrogen sulfate.
TSCA/CAS No.: 21351-39-3.

N-pHURIC GTO is a trademark of Agrium used under license by Monterey Chemical Company.

Manufactured For

Monterey Chemical Company
P. O. Box 35000
Fresno, CA 93745

Emergency Phone Numbers

Emergency Telephone: DAYS: (559) 499-2100 EVES.: (559) 431-7390
CHEMTREC (24-Hour Emergency Number): (800) 424-9300
EPA National Response Center: (800) 424-8802

SECTION 2. HAZARDOUS INGREDIENTS

CHEMICAL	CAS NO.	%	TLV OR PEL	RQ (lbs)
Monocarbamide dihydrogen sulfate	21351-39-3	79	See Section 8	N.A.

* N.A. - Not Available.

SECTION 3. EMERGENCY/HAZARDS OVERVIEW

Odorless, clear to slightly hazy pink liquid. Corrosive. Severe eye irritant. May cause severe burns. May be harmful if inhaled or swallowed. Reactive or incompatible with alkaline materials and many metals. Contain any liquid runoff. May be harmful to fish, livestock and wildlife.

HEALTH: 2 REACTIVITY: 2 FLAMMABILITY: 0 ENVIRONMENT: 2
(0 = Insignificant 1 = Slight 2 = Moderate 3 = High 4 = Extreme)

SECTION 4. FIRST AID

- Eyes: Check for and remove any contact lenses. IMMEDIATELY flush eyes with running water for 15-30 minutes, keeping eyelids open. Use warm water if available. Seek medical attention.
- Skin: MINOR CONTACT - Remove contaminated clothing as quickly as possible while protecting your own hands and body. Place the person under a deluge shower. Gently and thoroughly wash the contaminated skin with running water and non-abrasive soap. Use warm water if available. If irritation persists, seek medical attention.
EXTENSIVE CONTACT - If skin surface is damaged, immediately flush skin with water while removing contaminated clothing and shoes. Use warm water if available and continue flushing for at least 15, but preferably 30, minutes. GET MEDICAL ATTENTION. Contaminated clothing should be discarded in a manner that limits further exposure.
- Inhalation: Using appropriate respiratory protection, remove the affected individual from the area of overexposure. Loosen tight clothing. Allow the person to rest in a well-ventilated area. Give artificial respiration if breathing has stopped. Obtain immediate medical attention.
- Ingestion: Do not induce vomiting. Careful removal of the substance from the stomach by medical personnel is required. Call a physician or poison control center immediately. Get immediate medical attention. If tolerated, give no more than 1 cup of milk or water to rinse the mouth and throat and dilute the stomach contents. No more than 8 ounces (1 cup) in adults and 4 ounces (½ cup) in children is recommended to minimize the risk of vomiting.

SECTION 5.	FIRE AND EXPLOSION HAZARDS
------------	----------------------------

Flash Point:	Not applicable.
LEL/UEL Flammable Limits:	Not applicable.
Autoignition Temperature:	Not applicable.
Flammability Classification:	Noncombustible.
Known Hazardous Products of Combustion:	Can vigorously decompose under high temperature conditions (> 230°F, > 110°C) to release carbon dioxide gas. Small quantities of carbon dioxide will be released under normal storage conditions. If material is exposed to prolonged heat in a fire, oxides of carbon, nitrogen and sulfur may be formed.
Reactions that Release Flammable Gases or Vapors:	May react with incompatible metals to generate highly flammable and explosive hydrogen gas.
Unusual Fire & Explosion Hazards:	Do not allow water to enter container because of violent reaction. Container explosion may occur under fire conditions or when heated. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Responders should consider the need for evacuation based on concentrations of emitted decomposition products. Flammable hydrogen gas may be produced on prolonged contact with metals such as aluminum, tin, lead and zinc.
Extinguishing Media:	Suitable for surrounding materials.
Special Firefighting Procedures:	Wear positive pressure, self-contained breathing apparatus and full turnout gear. Dike and collect water used to fight fire for later treatment and disposal.

SECTION 6.	SPILLS AND LEAKS
------------	------------------

Evacuation:	Warn personnel to move away. Isolate area. Keep unnecessary and unprotected personnel from entering. Observe protective equipment requirements.
Containment:	Stop leak if possible to do so without risk. Prevent product spillage from entering sewage or drainage systems and drinking water supplies or streams.
Clean Up:	Contain spill with dry earth or sand. Dilute 3 to 1 with water. Neutralize spill by slowly and carefully applying powdered limestone or sodium carbonate to spill. Allow time to neutralize. Use appropriate equipment to recover spilled material for disposal. Ensure disposal complies with government requirements and local regulations. Consult your environmental advisor regarding recovery and disposal alternatives.
Evacuation:	Warn personnel to move away. Isolate area. Keep unnecessary and unprotected personnel from entering. Observe protective equipment requirements.

SECTION 7.	STORAGE AND HANDLING
------------	----------------------

Storage:	Store in original container in a cool, well-ventilated, dry place at temperatures above 40°F. Do not store near food or feeds. Do not stack pallets more than 2 high.
Transfer Equipment:	Will corrode incompatible metals. Polyethylene, polypropylene or 316L stainless steel are acceptable materials of construction. Ensure that all pumps, valves, meters, gaskets, etc. are of compatible material.
Work/Hygienic Practices:	Personnel handling this material should be well trained in the use of personal protective equipment, safe handling techniques, potential hazards and first aid requirements. Do not breathe fumes or mists. Avoid contact with eyes and skin. Keep away from incompatible materials. When using product, do not eat, drink or smoke. Ensure that an eyewash station and safety shower is near place of use.

SECTION 8. PERSONAL PROTECTIVE EQUIPMENT

Eyes:	Wear chemical safety goggles plus a face shield to prevent eye contact. As a general rule, do not wear contact lenses when handling.
Skin:	Wear acid resistant rubber gloves, boots, and a chemical resistant suit or apron.
Respiratory:	In case of insufficient ventilation, wear suitable NIOSH/MSH approved respiratory equipment. Protection provided by air purifying respirators may be limited.
Ventilation:	Recommended but no exposure limit established by government authorities. The following recommended occupational exposure limits are based on established ACGIH TLVs for acids: 8 hour TWA = 1 mg/m ³ ; 15 minute STEL = 3 mg/m ³ .

SECTION 9. PHYSICAL AND CHEMICAL DATA

Appearance:	Clear to slightly hazy pink liquid.
Odor:	Odorless.
pH:	1.0
Vapor Pressure:	Not available.
Vapor Density (Air = 1):	Not available.
Boiling Point:	Decomposes; 110°C (230°F)
Freezing Point:	Not available.
Water Solubility:	Easily soluble.
Density:	12.7 lbs./gal. (1520 kg/m ³)
Evaporation Rate:	Not available.
Viscosity:	Not available.
% Volatile:	24% (w/w).
Octanol/Water Partition Coefficient:	Not available.
Saturated Vapor Concentration:	Not available.

SECTION 10. STABILITY AND REACTIVITY

Stability:	Stable.
Incompatibility:	Reactive or incompatible with hypochlorites, sulfides, alkaline materials and many metals. Toxic or flammable gases may be formed or unacceptable corrosion may result
Corrosivity:	Extremely corrosive to copper, aluminum and zinc. Corrosive to mild steel, especially when diluted. Slightly corrosive to 304 stainless steel. Non-corrosive to fiberglass, CPVC, polyethylene, polypropylene or 316L stainless steel. Consult a metallurgical specialist to ensure compatibility with handling equipment.
Reactivity:	Reacts vigorously with water, especially when water is added to the product. Care must be taken to prevent excessive heating or spatter. Avoid excessive heat. If heated above 110°C will decompose to produce carbon dioxide.

SECTION 11. POTENTIAL HEALTH EFFECTSAcute Effects:

Eyes:	Severe irritant. Contact may result in severe irritation or eye burns resulting in permanent damage.
Skin:	Contact with intact skin does not normally cause immediate irritation, but prolonged contact may result in redness, swelling, skin burns and severe damage. LD ₅₀ = 2000 mg/kg [rabbit].
Ingestion:	Corrosive if swallowed. May cause severe irritation or burns to the mouth, throat and digestive tract. LD ₅₀ = 350 mg/kg [rat].
Inhalation:	Overexposure by inhalation may cause irritation and burning of the nose, throat and respiratory tract.

Chronic Effects: Prolonged or repeated overexposure by inhalation of skin or eye contact may result in severe irritation or corrosive effects. MCDS is not known to be carcinogenic, mutagenic or teratogenic.

SECTION 12. ECOLOGICAL INFORMATION

May be harmful to fish, livestock and wildlife. Dissolved mineral salts may cause irritation of the digestive tract. Non-persistent. Non-cumulative when applied using normal agricultural practices. The product itself and its products of degradation (nitrogen oxides and sulfur oxides) are not harmful under normal conditions of careful and responsible use.

Aquatic/Marine Toxicity: A toxic hazard to fish. Avoid spills or release to watercourses. Highly soluble. Will disperse with current. Release to watercourses may cause effects down stream from the point of release. U.S. D.O.T.: This material is not listed as a marine pollutant.

SECTION 13. DISPOSAL

Do not contaminate lakes, streams, ponds, estuaries, oceans or other waters by discharge of waste effluents or equipment washwaters. Ensure disposal complies with government requirements and local regulations. Container contents should be completely used and the containers rinsed prior to discard. Rinsate should be treated as a corrosive material. Also, chemical additions or other alterations of this product may invalidate any disposal information in this MSDS. Therefore, consult local waste regulators for proper disposal. Do not discharge.

SECTION 14. TRANSPORTATION

D.O.T. Shipping Description:

Motor Vehicle / Railcar:

DOT corrosive to aluminum. Not regulated if transported by motor vehicle or railcar in packaging that will not react dangerously or be degraded by this material [See 49 CFR §173.154(d)].

Air / Vessel:

Corrosive liquid, N.O.S. (monocarbamide dihydrogensulfate), 8, UN1760, PG III

Other Shipping Description:

Compounds, Water Treating, Liquid.
(NMFC Item 50313, LTL Class 65)

SECTION 15. REGULATORY INFORMATION

CERCLA: This product contains no Reportable Quantity (RQ) substances. However, since spilled material may react with water to release sulfuric acid, an effective RQ of 2040 lbs (161 gal) should be applied in the event of a spill.

TSCA (Toxic Substances Control Act): This product is listed on the TSCA Inventory.

PROPOSITION 65: None.

SECTION 16. OTHER

All information appearing in this document was based on data provided by third party sources and was compiled to comply with the Federal Hazard Communication Standard and the California Hazardous Substances Information and Training Act. The information is believed to be accurate as of the preparation date, but is not warranted as being the final authority in the use of this product. This information does not purport to be legal or medical advice.