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*The Best People.
The Best Products.
The Best Service.*

MATERIAL SAFETY DATA SHEET NO. 486

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name	First Choice® SURpHTAC ADJUVANT
Chemical Name	Monocarbamide Dihydrogensulfate Surfactant Solution
Common Name, Synonyms	Urea sulfate solution with surfactant
Manufactured By	Western Farm Service, Inc.
Emergency Telephone Number	Information (559) 436-2800 8am-5pm PST M-F CHEMTREC (800) 424-9300 24 hours every day

2. COMPOSITION / INFORMATION ON INGREDIENTS

Nutrients derived from the following **INGREDIENTS**

Chemical Name	CAS #
Monocarbamide dihydrogen sulfate	21351-39-3
Ethanol, 2, 2-oxybis	111-46-6
Water	7732-18-5

3. HAZARDS IDENTIFICATION

Emergency Overview	Green to blue-green transparent liquid. Faint ammonia odor
OSHA Hazard Category	CORROSIVE!
Potential Acute Health Effects	May cause severe burns. May be harmful or fatal if inhaled or swallowed. Severe eye irritant. Contact may result in severe irritation or eye burns resulting in permanent damage. Prolonged contact with skin may result in redness, swelling, skin burns and severe damage. Overexposure by inhalation may cause irritation and burning of the nose, throat and respiratory tract. Corrosive if swallowed. May cause severe irritation or burns to the mouth, throat and digestive tract. May aggravate existing skin or respiratory disorders.
Potential Chronic Health Effects	Prolonged or repeated overexposures by inhalation or skin or eye contact may result in severe irritation or corrosive effects. The mucous membranes, the respiratory and digestive systems are subject to irritant and corrosive effects from chronic exposures. Changes in pulmonary function may occur, along with chronic bronchitis and emphysema.

4. FIRST AID MEASURES

Eyes	Treat eyes immediately. Gently and thoroughly flush with water for 30 minutes or longer, keeping eyelids open. Obtain immediate medical attention.
Skin	Remove contaminated clothing and shoes as quickly as possible. Place the person under a deluge shower. Wash contaminated skin thoroughly with non-abrasive soap and water. Obtain medical attention.
Inhalation	If respiratory symptoms develop, remove person to fresh air immediately. Begin artificial respiration or CPR (cardiopulmonary resuscitation) if required and seek medical attention.
Ingestion	Do not induce vomiting. Get immediate medical attention. If immediate help is not available, and person is conscious, give no more than one cup of milk or water to rinse the mouth and throat and dilute the stomach contents. If vomiting does occur, lower the head so that the vomit will not reenter the mouth and throat. Rinse mouth with water.

5. FIRE FIGHTING MEASURES

FIRE AND EXPLOSION DATA

Flashpoint	Not flammable
Flammability Limits	Not flammable
Auto-ignition Temperature	Not applicable

SPECIAL FIRE FIGHTING PROCEDURES

Use extinguishing media suitable for surrounding materials. Fire fighters should wear self-contained breathing apparatus and full turnout gear. Product will decompose at high temperatures, (over 230°F) releasing carbon dioxide gas. If material is exposed to prolonged heat in a fire, oxides of carbon, nitrogen and sulfur may be formed. Fight fire from greatest possible distance to protect from steam eruptions, toxic fumes, and possible explosion. Ventilate closed spaces before entering. Always stay away from the ends of tanks. Dike and collect water used to fight fire for later treatment and disposal.

UNUSUAL FIRE AND EXPLOSION HAZARDS

This product will not burn. However, flammable hydrogen gas may be produced if product is in contact with incompatible metals such as aluminum, tin, lead and zinc. Also, at high temperatures, toxic oxides of carbon, nitrogen and sulfur may be formed.

<u>NFPA RATING</u>		<u>NFPA SCALE</u>	
Health Hazard	2	0 Least	1 Slight
Flammability	1	2 Moderate	3 High
Reactivity	1	4 Extreme	

6. ACCIDENTAL RELEASE MEASURES

First Choice® SURpHTAC ADJUVANT is corrosive. In case of spill observe protective equipment requirements. Isolate area. Keep unnecessary and unprotected personnel from entering. Contain spill with dry earth or sand. Prevent from entering sewage or drainage systems and bodies of water. Use appropriate equipment to recover as much spilled material as possible. Neutralize spill area with sodium carbonate or powdered limestone. Notify proper authorities, and downstream users about potentially contaminated water.

7. HANDLING AND STORAGE

Precautions	<p>Personnel handling this material should be well trained in the use of personal protective equipment, safe handling techniques, potential hazards and first aid requirements.</p> <p>Do not breathe fumes or mists. In case of insufficient ventilation, wear suitable respiratory equipment. Avoid contact with skin and eyes. Wear chemical resistant gloves, apron, rubber boots, and chemical goggles plus a face shield as necessary to prevent body contact.</p> <p>It is advisable to wash promptly if skin becomes contaminated; before eating, drinking, using tobacco, or chewing gum; before using toilet facilities; and at the end of the work shift before leaving the worksite.</p>
Storage	Store in cool, well ventilated areas away from heat or flame. Use acceptable materials of construction for all tanks, pumps and piping components that will come in contact with the material. Polyethylene, polypropylene or 316L stainless steel are acceptable materials of construction. Small quantities of carbon dioxide may be liberated during storage.
Spills	Spilled product can cause slippery surfaces.
Maintenance	Use care when welding or working on equipment that has contained this material. Thoroughly flush piping and pumps with water before welding or performing maintenance.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Limits:	None established by government authorities.
Ventilation:	Provide exhaust ventilation or other engineering controls to keep personnel exposure to mists and fumes to a minimum.
Personal Protection	The selection of personal protective equipment varies, depending upon the conditions of use. Appropriate protective clothing and eye protection should be used to prevent any possibility of body or eye contact. If splashing or misting might occur this would include chemical resistant gloves, boots, and apron as well as safety goggles and face shield.
Respiratory:	When workplace conditions warrant, a respirator approved for the service should be used.

9. PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point	Decomposes (230°F)
Freezing Point	Not known
Vapor Pressure	Not known
Vapor Density	Not known
Evaporation Rate	< N-Butyl Acetate
Solubility in Water	Complete
pH	0.5
Salt-out Temperature	not applicable
Specific Gravity (H ₂ O =1)	1.096
Density	68.35 pounds per cubic foot
Appearance and Odor	Green to blue green aqueous suspension. Faint ammonia odor.

10. STABILITY AND REACTIVITY

Stability	Stable under normal conditions of storage and handling.
Hazardous Polymerization	Not known to occur.
Incompatibility	Reactive or incompatible with nitrates, hypochlorites, sulfides, alkaline materials and many metals. Toxic or flammable gases may be formed, or unacceptable corrosion may result. Do not mix with UAN solutions.
Corrosivity	Extremely corrosive to copper, aluminum and zinc. Corrosive to mild steel and 304 stainless steel. Incompatible with nylon.
Conditions to Avoid	Avoid heating. If heated above 230°F decomposition will occur and carbon dioxide will be released. Prevent contamination with incompatible materials.

11. TOXICOLOGICAL INFORMATION

Published health information about ingredients includes the following:

Monocarbamide dihydrogen sulfate	LD50 = 350 mg/kg (rat)
Ethanol, 2, 2-oxybis	No data found

POTENTIAL CARCINOGEN DATA (IARC, NTP, OSHA)

None found for these suspensions

FOR HEALTH EMERGENCIES CALL YOUR LOCAL POISON CENTER

12. ECOLOGICAL INFORMATION

First Choice SURpTAC ADJUVANT is a plant food. However, large spills could possibly damage vegetation. Contamination of waterways could possibly cause fish kills. Prevent spread and runoff into storm sewers and ditches that lead to waterways.

13. DISPOSAL CONSIDERATIONS

If uncontaminated, recover and reuse as product. If contaminated with other materials, the nature and extent of contamination may require use of specialized disposal methods. Consult local, county, state, or federal regulatory agencies for acceptable disposal procedures and disposal locations.

14. TRANSPORTATION INFORMATION

DOT Proper Shipping Name	Corrosive Liquid N.O.S. (Monocarbamide dihydrogensulfate) 8, UN 1760, PG III, ERG 154
Special Provisions for Transport	Note: DOT corrosive to aluminum. Not regulated if transported by motor vehicle or railcar in packaging that will not react or be degraded by this material.

FOR TRANSPORTATION EMERGENCIES CALL CHEMTREC 1-800-424-9300

15. REGULATORY INFORMATION

This product contains no Reportable Quantity (RQ) substances.

EPA NATIONAL RESPONSE CENTER 1-800-424-8802

16. OTHER INFORMATION

DATE PREPARED	March 22, 2007
NAME OF RESPONSIBLE PARTY	Western Farm Service, Inc. P. O. Box 1168 Fresno, California 93715-1168 (559) 436-2800

NOTICE

All information appearing in this document is based on data provided by third party sources and is 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.

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