

Material Safety Data Sheet

10/

26/06

Section I - Chemical Product and Company Identification

Product Name:

Urea, Solutions

Ouachita Fertilizer Company, LLC

P O Box 4540

Monroe, Louisiana 71203

Phone: 318-388-0400

800-325-7204

Emergencies (800) 424-9300 (CHEMTREC) NFPA CODE

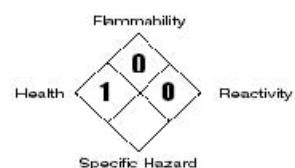
Web Site www.abellfertilizer.com Health Emergencies, Contact Your Local Poison Center

Common Name: Aqueous solutions of Urea (30% - 50%)

Formula: CO(NH₂)₂

Synonym: Urea Solution

Industrial,
Use: Animal Feed



Section II - Composition /Information on Ingredients

Chemical Names	Cas No.	OSHA PEL		TLV-TWA		Exposure Limits STEL		CEIL		% by weight
		Mg/m ³	ppm	mg/m ³	ppm	mg/m ³	ppm	mg/m ³	ppm	
Urea	57-13-6	none established								30 - 50

*Foliar - pH 7-8, Density 9.7 lbs/gallon @ 75°F, Specific Gravity 1.16 @ 75°/60°F prepared by neutralizing alkalinity in Urea 50 using Sulfuric Acid.

Section III - Hazard Identification

Potential Acute Health Effects:	skin: Repeated or prolonged contact may cause reddening, itching and inflammation. Ingestion: A single dose of 100 grams has reportedly caused mild symptoms of Central Nervous System depression e. g. drowsiness and slow reflexes.
Eyes and Skin:	Eyes: Liquid contact may irritate mildly Mist contact may also irritate mildly. Contact with heated material may cause thermal burns Skin: Liquid contact may irritate mildly with repeated or prolonged exposure.
Inhalation:	In the unlikely event that mist is formed, respiratory tract irritation may occur.
Ingestion:	A single dose of 100 grams has reportedly caused mild symptoms of central nervous system depression (e.g. drowsiness, slow reflexes, and slurred speech). May cause gastrointestinal disturbances (symptoms may include irritation, nausea, vomiting and diarrhea).
Potential Chronic Effects:	No potential chronic effects known. Urea is a naturally occurring chemical in the body. It is an end product of protein metabolism and is excreted in the urine. Health Carcinogenicity Lists: IARC Monograph: No NTP: No OSHA: No

Section IV - First Aid Measures

Eyes:	Promptly flush with water, continuing for 15 minutes. Eyelids should be held away from the eyeball to ensure thorough rinsing. If irritation persists, consult a physician immediately.
Skin:	Wash area of contact thoroughly with soap and water. For contact with molten product do not remove clothing. Flush skin immediately with cold water. Launder clothing before reuse.

Ingestion: Do not induce vomiting. Keep affected person warm and treat for shock. Get medical attention. A single dose of 100 grams has reportedly caused mild symptoms of Central Nervous System depression (drowsiness, etc.).

Inhalation: Remove affected person from source of exposure. If not breathing, ensure open airway and initiate CPR. If breathing is difficult, administer oxygen; if available get medical attention.

Section V - Fire Fighting Measures

Flash Point: Not Applicable _____ **Autoignition Temperature:** Not Available

Lower Explosive Limit: Not Available **Upper Explosive Limit:** Not Available

Unusual Fire and Explosion Hazards: See Hazardous Decomposition Products, Section X.

Extinguishing Media: Water recommended, all standard agents are acceptable.

Special Firefighting Procedures and Equipment: Wear sufficient self-contained breathing apparatus approved by NIOSH. Use water spray to keep containers cool.

Section

VI – Accidental Release Measures

Small Spill: Promptly absorb with commercial or other absorbent and shovel into container.(e. g. metal)

Large Spill: Dike up with same absorbent and mop up or pump into same container. If some solid crystallized due to cooling, wash with water. Cleanup should not be delayed.

Release Notes: If spill could potentially enter any waterway, including intermittent dry creeks, contact the local authorities. If in the U.S., contact the US COAST GUARD NATIONAL RESPONSE CENTER toll free number 800-424-8802. In case of accident or road spill notify: CHEMTREC IN USA at 800-424-9300; CANUTEC in Canada at 613-996-6666 CHEMTREC in other countries at (International code)+1-703-527-3887.

Comments: See Section XIII for disposal information and Section XV for regulatory requirements. Large and small spills may have a broad definition depending on the user's handling system. Therefore, the spill category must be defined at the point of release by technically qualified personnel.

Section VII - Handling and Storage

Ventilation: Provide local or general ventilation to keep below nuisance dust limit of 15mg/m³.

Handling: Avoid contact with eyes. Avoid prolonged or repeated contact with skin or clothing. Avoid breathing mist.

Storage: Protect from physical damage. This material is vented in storage. Avoid containers, piping or fittings made of brass, bronze, or other copper-bearing alloys, or galvanized metal.

Section VIII - Exposure Controls/Personal Protection

Engineering Controls: Ordinarily, natural ventilation is adequate. If misting, mechanical (general) ventilation is generally adequate.

Personal Protection:

Eye Protection: Wear chemical safety goggles or face shield. Do NOT wear contact lenses.

Protective Clothing: Impervious gloves and full work clothing.

Respiratory Protection: Not generally required. If misty condition prevails, wear a NIOSH approved mist respirator.

Other Protective Clothing or Equipment: Not generally required

Section IX - Physical and Chemical Properties

Appearance/Color/Odor:

This material at normal conditions is colorless liquid; mildly ammoniacal odor.

Melting Point Range:	Salt Out Temperature	Boiling Point:	106°C
	50% 63°F 17°C	Boiling Point Range: Not	Available
70%	65% 115°F 46°C	Vapor Pressure (mmHg):	80Pa at 20°C (calculated)
	135°F 57°C	Molecular Weight:	60.07 (100% Urea)
Solubility in water: 100%	(liquid) 50% 1.14; 65% 1.165:	% Volatiles:	Not Available
	70% 1.175		
Vapor Density: 0.596	(Ammonia)	Density: 750	kg/m ³ (100% water)
Bulk Density:	9.2 – 9.7 @ 100% (40-70%)		
9.7	@ 75°F (foliar 50)		
pH T	ypically 10.0		
Viscosity:	Not Applicable		

Section X - Stability and Reactivity

Stability:	This product is stable under normal conditions of temperature and pressure.
Hazardous Polymerization:	Will not occur
Conditions to Avoid:	The Evaporation residue should not be heated above its melting point, 133°C. Decomposes to hazardous products
Materials to Avoid:	Avoid contact with strong oxidizers (e.g. chlorine, peroxide, chromates, nitric acid, perchlorates, concentrated oxygen, permanganates) which can generate heat, fire or explosions or release toxic fumes.
Hazardous Decomposition Products:	If the evaporation residue is heated to the melting point or above, Ammonia and carbon dioxide are formed. Some Ammonia and CO₂ are given off on heating the aqueous product. Under some conditions of pressure and temperature, some Ammonium Cyanate has also been reported.

Section XI - Toxicological Information

Significant Routes	Eyes, Digestive Tract, Respiratory Tract, Skin of Exposure:
Toxicity to Animals:	Acute Oral Toxicity: (rat): LD ₅₀ = 14,300 – 15,000 mg/kg; (mouse) 11,500 – 13,000 mg/kg.; (cattle): 510 mg/kg. Repeated Dose: (rat) 24 weeks; dermal - NOAEL = 40% in ointment Skin Irritation/Corrosion: Mouse – Not irritating (10% solution) Eye Irritation/Corrosion: Rabbit – Not irritating (50% solution) Not found to be toxic by oral exposure as defined by OSHA. Based on toxicity data for another compound (i.e., ammonium nitrate), not expected to be toxic by dermal and inhalation exposure as defined by OSHA.

Special Remarks on Toxicity to Animals:	Bacterial Genetic Toxicity in vitro : (Salmonella typhimurium) – Bacterial reverse mutation assay-Negative; Chinese Hamster -- Chromosomal aberration test – Positive (very high dose); Mouse – Mouse lymphoma TK locus assay -Positive (very high dose). Genetic Toxicity in vivo : Mouse – Bone marrow cytogenetic test – Positive (extremely high dose). Toxicity to Reproduction: No toxic effects on mouse gonads up to 6,750-mg/kg day. No toxic effects on rat gonads up to 2,250-mg/kg day. Developmental Toxicity / Teratogenicity: Not teratogenic.
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Other Effects on Humans:	May cause gastrointestinal disturbances (symptoms may include irritation, nausea, vomiting and diarrhea).
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Special Remarks on Chronic Effects on Humans:	No chronic effects known.
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Special Remarks on Other Effects on Humans:	May be irritating at > 10% concentration; not a skin sensitizer. Despite extensive medical use, no significant side effects on humans have been noted.
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Section XII - Ecological Information

Ecotoxicity: **Acute Toxicity to Fish: 96 -h** : (Barillius barna) LC₅₀ > 9,100 mg/L. **Acute Toxicity Aquatic Invertebrates:** (Daphnia magna) : **24 - h EC₅₀ = > 10,000 mg/L** . **Toxicity to Aquatic Plants:** (Scenadesmus quadricauda) 192-hr cell multiplication inhibition test-TT>10,000 mg/L. **Toxicity to Other Non-Mammalian Terrestrial Species:** (Pigeon)Subcutaneous-LD₅₀=16,000 mg/kg. Since Urea is a fertilizer, it may promote eutrophication in waterways.**Non-toxic to aquatic organisms as defined by USEPA.**

Environmental Fate: **Stability in water:** T_{1/2} > 1 year. **Transport:** 0.16% in air; 99.84% in water

Toxicity: No known toxicity

Degradation Products:

Biodegradation: Ultimately biodegradable.

Section XIII - Disposal Considerations

Product Disposal: Disposal of Urea may be subject to federal, state or local regulations.

General Comments: Users of this product should review their operations in terms of applicable federal, state and local laws and regulations, then consult with appropriate regulatory agencies before discharging or disposing of waste material.

Section XIV – Transportation Information

Proper Shipping Name: Not
Hazard Class: U S DOT
Identification Number: Regulated
Packing Group (technical Name)
Labeling/Placarding
Authorized Packaging:
Notes:

Section XV – Regulatory Information

UNITED STATES:

SARA Hazard Category:

This product has been reviewed according to the EPA Hazard Categories promulgated under Section 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

Fire: No **Pressure Generating:** No **Reactivity:** No **Acute:** Yes **Chronic:** No

40 CFR Part 355 -Extremely Hazardous Substances: None
40 CFR Part 370 -Hazardous Chemical Reporting: Applicable
All intentional ingredients listed on the TSCA inventory.

Sara Title III Information;

This product contains the following substances subject to the reporting requirements of Title III (EPCRA) of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:

Chemical	CAS No.	Percent by Weight	CERCLA RQ (lbs)	SARA (1986) Reporting		
				311	312	313
Urea	57-13-6	97.5 - 99.7	NA	Yes	Yes	NA

**CERCLAS/Superfund,40
CFR Parts 117,302**

If this product contains components subject to substances designated as **CERCLA Reportable Quantity (RQ) Substances**, it will be designated in the above table with the **RQ** value in pounds. If there is a release of **RQ Substance** to the environment, notification to the National Response Center, Washington D.C. (1-800-424-8802) is required.

NFPA Hazard Ratings:: **Health:** 1 **Fire:** 0 **Reactivity:** 0 **Special Hazards:**

0 = Insignificant 1 = Slight 2= Moderate 3 = High 4= Extreme

COMMENTS: **This product is TSE/BSE (Transmissible Spongiform Encephalopathy/Bovine Spongiform Encephalopathy) free. There are no animal constituents used in the manufacture of Urea, liquor for PCS Sales (USA) Inc. Our product is created through a chemical process.**

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