

Urea Solution

SAFETY DATA SHEET

1. SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier

Product identifier	Urea Solution.
Synonym(s)	Carbamide, Carbonyldiamide.
Chemical Family	Carboxylic acids.
Molecular weight	60.7 as 100% Urea.
CAS No.	Mixtures.

1.2 Recommended use of the chemical and restrictions on use

Identified Use(s)	Fertilizer, Emissions control.
Uses Advised Against	None known.

1.3 Supplier's details

Company Identification	Cornerstone Chemical Company 10800 River Road, Waggaman, Louisiana 70094, USA.
Telephone	1-504-431-9511
E-mail	info@cornerstonechemco.com

1.4 Emergency Phone No.

CHEMTREC (USA and Canada)	1-800-424-9300 (24h)
CHEMTREC (Outside of USA and Canada)	+1-703-527-3887 (24h)

2. SECTION 2: HAZARDS IDENTIFICATION

2.1 **Classification of the substance or mixture** Not classified as dangerous for supply/use.

2.2 Label elements

Hazard Pictogram(s)	None.
Signal Word(s)	None.
Hazard Statement(s)	None.
Precautionary Statement(s)	None.

2.3 **Other hazards** None.

2.4 **Additional Information** None.

3. SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Mixtures

Hazardous Ingredient(s)	CAS No.	%W/W
Urea	57-13-6	<70
Water	7732-18-5	>30
Ammonia, anhydrous	7664-41-7	<1

3.2 Additional Information

None.

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4. SECTION 4: FIRST AID MEASURES



4.1	Description of first aid measures	
	Inhalation	If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. If symptoms persist, obtain medical attention.
	Skin Contact	Wash affected skin with soap and water. If symptoms persist, obtain medical attention.
	Eye Contact	Flush eyes with water for at least 15 minutes while holding eyelids open. If symptoms persist, obtain medical attention.
	Ingestion	Rinse mouth. Drink one glass of water. Do not give anything by mouth to an unconscious person. If symptoms persist, obtain medical attention.
4.2	Most important symptoms and effects, both acute and delayed	Unlikely to be required but if necessary treat symptomatically.
4.3	Indication of any immediate medical attention and special treatment needed	No special requirements.

5. SECTION 5: FIRE-FIGHTING MEASURES

5.1	Extinguishing Media	
	Suitable Extinguishing Media	Extinguish with water spray, dry chemical, sand or carbon dioxide.
	Unsuitable Extinguishing Media	None known.
5.2	Special hazards arising from the substance or mixture	Decomposition products: Ammonia, Carbon monoxide, Carbon dioxide, Oxides of nitrogen.
5.3	Advice for fire-fighters	Fire fighters should wear complete protective clothing including self-contained breathing apparatus. Keep containers cool by spraying with water if exposed to fire.

6. SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1	Personal precautions, protective equipment and emergency procedures	Ensure adequate ventilation. Stop leak if safe to do so. Wear protective gloves/eye protection. Wash hands thoroughly after handling.
6.2	Environmental precautions	Do not allow to enter drains, sewers or waterways.
6.3	Methods and material for containment and cleaning up	Cover spills with inert absorbent material. Transfer to a container for disposal. Wash the spillage area with water.
6.4	Reference to other sections	See Also Section 8, 13.

7. SECTION 7: HANDLING AND STORAGE

7.1	Precautions for safe handling	Provide adequate ventilation. Wear protective gloves/eye protection. Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling.
7.2	Conditions for safe storage, including any incompatibilities	
7.2.1	Storage temperature	Ambient temperatures.
7.2.2	Storage life	Stable under normal conditions.

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7.2.3 **Incompatible materials**

Oxidizing agents, Steel.

8. SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 **Control parameters**
Occupational Exposure Limits

SUBSTANCE	CAS No.	LTEL (8 hr TWA ppm)	LTEL (8 hr TWA mg/m ³)	STEL (ppm)	STEL (mg/m ³)	Note
Ammonia, anhydrous	7664-41-7	25	18	35	27	USA (NIOSH/OSHA)
		50	35	-	-	TLV (ACGIH)

Source: NIOSH = National Institute of Occupational Safety & Health
OSHA = Occupational Safety and Health Administration
TLV = Threshold Limit Value
ACGIH = American Conference of Industrial Hygienists

8.2 **Appropriate engineering controls**

Provide adequate ventilation.

8.3 **Individual protection measures, such as personal protective equipment (PPE)**

Eye/face protection



Wear protective eye glasses for protection against liquid splashes. Wear close fitting goggles or full face shield.

Skin protection



Wear suitable protective clothing and gloves.
Wear: Impervious gloves and boots.

Respiratory protection



Normally no personal respiratory protection is necessary.
Wear suitable respiratory protective equipment if exposure to levels above the occupational exposure limit is likely.

Thermal hazards

Not applicable.

9. SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 **Information on basic physical and chemical properties**

Appearance	Colorless.
Color	Liquid.
Odor	Ammoniacal.
Odor Threshold	Not available.
pH	~10
Melting Point/Freezing Point	90.6 °C (195 °F)
Initial boiling point and boiling range	~106 °C (222.8 °F)
Flash point	Not applicable.
Evaporation Rate	Not available.
Flammability (solid, gas)	Non-flammable.
Upper/lower flammability or explosive limits	Not applicable.
Vapor pressure	~80Pa @ 20 °C
Vapor density	Not available.
Relative density	1.13

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Solubility(ies)	Soluble in water.
Partition coefficient: n-octanol/water	Not available.
Auto-ignition temperature	Not available.
Decomposition Temperature	100 °C (212 °F)
Viscosity	Not available.
Explosive properties	Not explosive.
Oxidizing properties	Not oxidizing.
9.2 Other information	
Percent Volatile by volume (%)	1.0 – 1.5

10. SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity	Stable under normal conditions.
10.2 Chemical stability	Stable under normal conditions.
10.3 Possibility of hazardous reactions	Stable under normal conditions.
10.4 Conditions to avoid	Stable under normal conditions.
10.5 Incompatible materials	Oxidizing agents, Steel.
10.6 Hazardous decomposition product(s)	Ammonia, Carbon monoxide, Carbon dioxide, Oxides of nitrogen.

11. SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects	
Acute toxicity	
Oral	Low acute toxicity. LD50 (rat) >5000mg/kg
Dermal	Low acute toxicity. LD50 (rat) >2000mg/kg
Inhalation	Dried urea dust: May cause irritation.
Skin corrosion/irritation	Product as supplied: Non-irritant. Dried urea dust: May cause irritation.
Serious eye damage/irritation	Not classified.
Respiratory or skin sensitization	It is not a skin sensitizer.
Germ cell mutagenicity	There is no evidence of mutagenic potential.
Carcinogenicity	No evidence of carcinogenicity.
Reproductive toxicity	None anticipated.
STOT - single exposure	None anticipated.
STOT - repeated exposure	None anticipated.
Aspiration hazard	None anticipated.
11.2 Other information	None.

12. SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity	Low toxicity to aquatic organisms.
12.2 Persistence and degradability	The product is biodegradable. The product is unlikely to persist in the environment. Urea (OECD 302): 96%
12.3 Bioaccumulative potential	The product has no potential for bioaccumulation.
12.4 Mobility in soil	The product is soluble in water.
12.5 Other adverse effects	None anticipated.

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13. SECTION 13: DISPOSAL CONSIDERATIONS

- | | |
|-------------------------------------|---|
| 13.1 Waste treatment methods | Bury on an authorized landfill site or incinerate under approved controlled conditions. |
| 13.2 Additional information | Disposal should be in accordance with local, state or national legislation. |
| US RCRA Hazard Class | Not listed. |

14. SECTION 14: TRANSPORT INFORMATION

D.O.T. Classification

Not classified as dangerous for transport.

- | | |
|---|-----------------|
| 14.1 UN number | Not applicable. |
| 14.2 Proper Shipping Name | Not applicable. |
| 14.3 Transport hazard class(es) | Not applicable. |
| 14.4 Packing group | Not applicable. |
| 14.5 Environmental hazards | Not applicable. |
| 14.6 Special precautions for user | Not applicable. |
| 14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code | Not applicable. |

15. SECTION 15: REGULATORY INFORMATION

- | | |
|--|---|
| 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture | |
| 15.1.1 OSHA | |
| Toxic and hazardous substances (29 CFR 1910.1900) | Not listed. |
| Requirements for preparation, adoption, and submittal of implementation plans (40 CFR 51.100) | Not listed. |
| National emission standards for hazardous air pollutants (40 CFR 61.01) | Not listed. |
| 15.1.2 Title III Consolidated List of Lists | |
| CAA Section 112(r) List of Substances for Accidental Release Prevention | Ammonia (CAS No.: 7664-41-7): Listed. (≥20%).
Product as supplied: <1% Ammonia. |
| 15.1.3 OSPAR List of Chemicals for Priority Action | Not listed. |
| 15.1.4 State Right to Know Lists | Ammonia (CAS No.: 7664-41-7): California, New Jersey, Pennsylvania, Minnesota, Massachusetts. |
| 15.1.5 TSCA | All ingredients are listed. |
| 15.1.6 Proposition 65 (California) | Not listed. |
| 15.1.7 Ozone Depleting Substances | Not listed. |

16. SECTION 16: OTHER INFORMATION

The following sections contain revisions or new statements: 1-16.

NFPA		HMIS	
Health	1	Health	1
Fire	0	Flammability	0
Instability	0	Physical hazards	0

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LEGEND

LTEL	Long Term Exposure Limit
STEL	Short Term Exposure Limit
STOT	Specific Target Organ Toxicity
OSHA	Occupational Safety and Health Administration
TSCA	Toxic Substances Control Act
NFPA	National Fire Protection Association
HMIS	Hazardous Material Information System
OECD	Organization for Economic Co-operation and Development

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