



Safety Data Sheet

1. Product Identifier and Company Identification

Product name : Urea Solution – High Purity 32.5%
HBCC SDS number : CU02460M0
Synonym : Urea Solution; Urea liquor; Diesel Exhaust Fluid (DEF),
Product use and Restrictions : Refer to label or call
Manufacturer : Corporate Headquarters
Contact Address : Hill Brothers Chemical Company
1675 North Main Street
Orange, California 92867
714-998-8800
800-821-7234
Corporate Safety & Compliance
Hill Brothers Chemical Company
7121 West Bell Road, Suite 250
Glendale, Arizona 85308
623-535-9955 - Office
623-535-9944 - Fax
Emergency telephone Number (Chemtrec) : 800-424-9300
Website : <http://hillbrothers.com>

2. Hazard Identification

Classification : None
Signal Word : None
Pictogram(s) : None
Hazard Statements : None

Precautionary Statements

Response : None
Prevention : None
Storage : None
Disposal : None

3. Composition/Information on Ingredients

| CAS Number | Ingredient Name | Weight % |
|------------|-----------------|----------|
| 57-13-6 | Urea | 31-33% |
| 7732-18-5 | Water | 67-69% |
| 7664-41-7 | Ammonia | ≤0.15% |

4. First Aid Measures

Summary of First Aid Measures

Ingestion : Do not induce vomiting. Get medical attention immediately.
Inhalation : Remove to fresh air and keep at rest in a position comfortable for breathing. Obtain medical attention if breathing difficulty persists.

- Skin** : Remove contaminated clothing. Rinse immediately with plenty of water. Obtain medical attention if irritation develops or persists. Wash contaminated clothing before reuse.
- Eyes** : Immediately flush with large amounts of water, including under the eyelids. If pain or irritation persists seek medical attention. Speed and thoroughness in rinsing eyes are important to avoid permanent injury.
- Medical Conditions**
- Effects of Acute and Delayed Exposure
- Inhalation** : May cause respiratory irritation.
Skin Contact : May cause skin irritation.
Eye Contact : May cause eye irritation.
Ingestion : Do not induce vomiting. Get medical attention immediately.
Chronic Symptoms : None expected under normal conditions of use.
- Indication of Any Immediate Medical Attention and Special Treatment Needed** : If exposed and feeling unwell, seek medical advice (show the label where possible).

5. Fire Fighting Measures

- Extinguishing** : Use extinguishing media appropriate for surrounding fire. Unsuitable Extinguishing Media: Do not use heavy water stream. Use of Heavy water stream of water may spread fire.
- Special Exposure Hazards** : Fire Hazard: Not combustible but may decompose at high temperatures. Explosion Hazard: Product is not explosive. Reactivity: Hazardous reactions will not occur under normal conditions.
- Special Protective** : Do not enter fire area without proper protective equipment, including Respiratory protection.
- Fire Fighting Procedures** : Precautionary Measures Fire: Exercise caution when fighting any chemical fire. Under fire conditions, hazardous fumes will be present. Firefighting Instructions: Use water spray or fog for cooling exposed containers.
- NFPA Rating** : Health - 1
 Flammability - 0
 Instability - 0



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

6. Accidental Release Measures

- Personal Precautions** : Equip Cleanup crew with proper protection.
- Emergency Procedures** : Ventilate area.
- Methods of Containment And Clean-Up** : Contain any spills to prevent migration and entry into sewers or streams. Clean up spills immediately and dispose of safely. Transfer spilled material to a suitable container for disposal. Contact competent authorities as appropriate after a spill. Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

7. Handling and Storage

- Safe Handling** : Store in compliance with all Federal, State, and local regulations. Store in a well-ventilated area, away from incompatible materials or sources of heat and ignition. Empty containers may contain residue and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind or expose such containers to heat, flames, sparks or other sources of ignition; they may evolve noxious fumes.
- Storage** : Store in compliance with all Federal, State, and local regulations.
- Work/Hygienic Practices** : Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

8. Exposure Controls/Personal Protection

Occupational Exposure Limits :

| Chemical Name: Urea Solution – High Purity 32.5% | | | | |
|--|----------|-----------|----------|------|
| Exposure Limits (TWAs) in Air | | | | |
| CAS Number | Chemical | ACGIH TLV | OSHA PEL | STEL |
| 57-13-6 | Urea | N/A | N/A | N/A |
| 7664-41-7 | Ammonia | 25 | 50 | 35 |

Ensure adequate ventilation, especially in confined areas. Emergency eye wash fountains and safety showers should be available but not required.

Protective Equipment : Safety glasses, gloves and general work clothing are recommended. Where Ventilation is insufficient, wear respiratory protection. Wearing of appropriate protective clothing and gloves is suggested if epidermal sensitivity develops. Wear chemically resistant protectives gloves.

Eye Protection : Safety glasses.

Respiratory : Use a NIOSH-approved respirator or self-contained breathing apparatus whenever exposure may exceed established Occupational Exposure Limits.

9. Physical and Chemical Properties

| | |
|--|--|
| Appearance: Colorless liquid | Odor: slight ammonia odor |
| Odor Threshold: Not available | pH: 7.5-10 |
| Melting Point/Freezing Point: 11.5F | Initial Boiling Point/Range: 219°F |
| Flash Point: Not applicable | Evaporation Rate (BuAc=1): Not available |
| Flammability: Not applicable | Lower/Upper Explosive Limit: Not applicable |
| Vapor Pressure (mmHg): Not available | Vapor Density (Air=1): Not available |
| Specific Gravity @ 20°C: 1.09cc (9.1 lb/gal) | Solubility in Water: 100% |
| Heat of Solution in H₂O: Not available | Heat Capacity at 25° C (77° F): Not available |
| Decomposition Temperature: 135°C (275°F) Urea | Density at 25° C (77° F): 9.1 Lbs./Gal |
| % Volatiles: Not available | Loose Bulk Density: Not available |
| Molecular Weight: 60.07 (100% Urea) | VOC: Not available |

10. Stability and Reactivity

- Reactivity** : Hazardous reactions will not occur under normal conditions.
- Chemical Stability** : Stable under recommended handling and storage conditions (see section 7).
- Possibility of Hazardous Reactions or Polymerizations** : Hazardous polymerization will not occur.
- Conditions to Avoid** : Avoid exposing containers to heat or flame. Keep separated from incompatible materials.
- Incompatible Materials** : Nitric acid. Gallium. Perchlorates. Strong oxidizers. Caustic products. Alkalis.
- Hazardous Decomposition Products** : Ammonia. Nitrogen oxides.

11. Toxicological Information

- Acute and Chronic Effects** : Not classified
- Routes of Exposure**
- Inhalation** : Yes
 - Ingestion** : Yes
 - Skin** : Yes
 - Eyes** : Yes
- Symptoms related to Physical, Chemical & Toxicological Characteristics** : Not classified
- Numerical Measures of Toxicity (Urea)** : LD50 Oral Rat = 8471 mg/kg

Numerical Measures of Toxicity (Ammonia) : LD50 Inhalation Rat = 5.1 mg/l (exposure time 1 h)
LD50 Inhalation Rat = 2000 ppm/4h (exposure time 4 h)

Chronic Toxicity : None expected under normal conditions of use.

Carcinogenicity :

| Product Name: Urea Solution – High Purity 32.5% | | | | | |
|---|------|-----|-------|-----|------|
| ACGIH | IARC | EPA | NIOSH | NTP | OSHA |
| - | - | - | - | - | - |

TARGET ORGANS : N/A

12. Ecological Information

Ecotoxicity : **Urea**
LC50 Fish 1 = 16200 -18300 mg/l (exposure time 96 h – Species: Poecilia reticulata)
EC50 Daphnia 1 = 3910 mg/l (exposure time 48 h – Species: Daphnia magna [static])
Ammonia
LC50 Fish 1 = 0.44 mg/l (exposure time 96 h – Species: Cyprinus carpio)
EC50 Daphnia 1 = 25.4 mg/l (exposure 48 h – Species: Daphnia magna)
LC50 Fish 2 = 0.26 - 4.6 mg/l (exposure 96 h – Species: Lepomis macrochirus)

Persistence and Degradability : Not available

Bioaccumulative Potential :

| Product/Ingredient | Log _{Pow} | BCF | Potential |
|--------------------|--------------------|-----|-----------|
| Urea | -1.59 (at 25°C) | <10 | - |

Mobility in Soil : Not available

13. Disposal Considerations

Dispose of waste material in accordance with all local, regional, national, and international regulations.
Additional Information: Spilled chemical can be used as fertilizer.

14. Transport Information

This product is not regulated for transport as a hazardous material, substance or dangerous good.

15. Regulatory Information

SARA 302 Extremely Hazardous Substances (EHS) : No chemical in this product is listed as an Extremely Hazardous Substance (EHS) under Section 302 of EPCRA.

SARA 304 Extremely Hazardous Substances (EHS) Release Notification : No chemical in this product is listed as an Extremely Hazardous Substance (EHS) which, if released to the environment in quantities at or above the substance's Reportable Quantity (RQ), would require reporting to the SERC and LEPC under Section 304 of EPCRA.

SARA 311/312 Hazards

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| SARA 311/312 Hazards | | | | |
|----------------------|---------|--------------|----------|------------|
| Acute | Chronic | Flammability | Pressure | Reactivity |
| No | No | No | No | No |

SARA 313 Reportable Chemicals

: No chemical in this product is subject to annual emissions, transfers, or waste management reporting under the Community-Right-to-Know provisions of EPCRA Section 313, also known as the Toxic Release Inventory (TRI) Report or Form R.

CERCLA Hazardous Substances

: No chemical in this product is listed as a CERCLA hazardous substance subject to the National Response Center (NRC) release reporting requirements.

Clean Air Act (CAA) Section 112(r) Air Pollutants

: No chemical in this product is listed as an air pollutant under the U.S. Clean Air Act, Section 112(r) (40 CFR 61).

California Prop 65 Chemicals

: This product does not contain any chemicals known to the state of California to cause cancer and birth defects or other reproductive harm.

Hazard Label Warning

: This product does not require hazard label warnings.

TSCA (Toxic Substances Control Act)

: All chemical substances in this product are listed on the U.S. TSCA Inventory List.

ACRONYMS:

- CAS # - Chemical Abstract Services Registry Number
- CFR - Code of Federal Regulations
- CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act
- EPCRA - Emergency Planning and Community Right-to-Know Act
- LEPC - Local Emergency Planning Committee
- SERC - State Emergency Response Commission

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| 16. Other Information |
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- Revision date** :
- Supersedes** :
- First Issue** : 09/28/2017
- Section(s) changed since last revision** : First Issue SDS

IMPORTANT! Read this SDS before use or disposal of this product. Pass along the information to employees and any other persons who could be exposed to the product to be sure that they are aware of the information before use or other exposure. This SDS has been prepared in accordance with the Globally Harmonized System of Chemical and Labeling of Chemicals (GHS) Fifth Edition and the OSHA Hazard Communication Standard [29 CFR 1910.1200]. The SDS information is based on sources believed to be reliable. Available data, safety standards, and government regulations are subject to change and the conditions of handling and use, or misuse are beyond our control; **Hill Brothers Chemical Company** makes no warranty, either expressed or implied, with respect to the completeness or continuing accuracy

of the information contained herein and disclaims all liability for reliance thereon. Additional information may be necessary or helpful for specific conditions and circumstances of use. It is the user's responsibility to determine the suitability of this product and to evaluate risks and exercise appropriate precautions for protection of employees and others prior to use.