

# Certified DEF™

## SAFETY DATA SHEET

### SECTION 1. IDENTIFICATION

**Trade Name (as labeled):** Certified DEF  
**Common Name:** Diesel Exhaust Fluid, Urea Solution  
**Distributed By:** Certified DEF  
50 W Forest Street  
Brigham City, UT 48302  
**Business Phone:** 435-723-5225  
**Toll Free Phone:** 435-538-5264  
**Date of Preparation:** February 2013

### SECTION 2. HAZARD(s) IDENTIFICATION

**Emergency Overview:**

Caution - Eye and Skin Irritant

**Symptoms Of Over Exposure:**

Routes of exposure: Eye, Skin contact, Inhalation, Ingestion

Eyes: May cause irritation

Skin: May cause irritation

Inhalation: May cause irritation, May cause respiratory tract irritation

Ingestion: May cause stomach distress, nausea or vomiting

Target Organs: Eyes, skin and respiratory system.

Signs and symptoms: May include redness, edema, drying, cracking of the skin,

Symptoms of exposure may be headache, dizziness, tiredness, nausea and vomiting.

**Hazardous Material Information Rating System:**

(0 = least; 1 = slight; 2 = moderate; 3 = high; 4 = extreme)

**Health (blue) 1**

**Flammability (red) 0**

**Reactivity (yellow) 0**

### SECTION 3. COMPOSITION/ INFORMATION ON INGREDIENTS

Chemical		
Name	CAS #	% by weight
Urea	57-13-6	32.5
Water	7732-18-5	67.5

## SECTION 4. FIRST-AID MEASURES

**If Inhaled:** Remove to fresh air. If breathing becomes difficult, contact a medical physician. Give artificial respiration if victim is not breathing and obtain immediate medical attention.

**If Ingested:** Call physician or Poison Control Center immediately for most current information. Dilute with large amounts of water. Do not induce vomiting unless directed to do so by a medical professional. Never induce vomiting or give diluents (milk or water) to someone who is unconscious, having convulsions, or who cannot swallow. If vomiting occurs, keep head lower than hips to prevent introduction of fluid into the lungs.

**In Case Of Skin Contact:** Wash thoroughly with soap and water. Remove contaminated clothing and wash before reuse. Seek medical attention if skin becomes irritated.

**In Case Of Eye Contact:** Flush immediately with water for at least 15 minutes, lifting the upper and lower eyelids occasionally. Call a physician if eye irritation persists.

Victims of chemical exposure and all rescuers must be taken for medical attention. Take a copy of label and MSDS to physician or health professional with victim.

## SECTION 5. FIRE-FIGHTING MEASURES

**Flash Point:** Not flammable.

**Test Method:** Not flammable.

**LEL Flammable Limits:** Not flammable.

**UEL Flammable Limits:** Not flammable.

**Auto ignition Temperature:** Not flammable.

**Extinguishing Media:** Water spray, Foam, Carbon Dioxide, Dry-Chemical.

**Unusual Fire and Explosion Hazards:** Avoid high temperatures that may cause thermal decomposition ..

**Special Firefighting Procedures:** Wear positive pressure, self-contained breathing apparatus (SCBA) and goggles.

## SECTION 6. ACCIDENTAL RELEASE MEASURES

**Spill And Leak Response:** For small or incidental spills, the minimum personal protective equipment should be rubber gloves, rubber apron, and chemical goggles. Uncontrolled releases should be responded to by trained personnel using pre-planned procedures. Proper protective equipment should be used. Gas masks with ammonia canister or SCBA gear may be required. For large spills, contain by diking with soil, sand or other absorbent material such as vermiculite or diatomaceous earth. Keep material out of sewers, storm drains, and surface waters. Comply with all applicable government regulations on spill reporting, handling, and waste disposal.

## SECTION 7. STORAGE AND HANDLING

**Storage Practices:** Store in areas away from children, feed and food products and sources of heat. Immediately clean up spills that occur during handling or storage. Protect from freezing keep containers closed when not in use.

Optimal Storage Temperature 40 to 80°F.

**Handling Practices:** Keep away from incompatible materials. Do not breathe mists. Wash thoroughly after handling. Avoid contact with eyes, skin, and clothing. Wash with soap and water after handling.

## SECTION 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

**Ventilation/Engineering Controls:** Use with adequate ventilation to keep airborne levels below recommended exposure limits.

**Respiratory Protection:** If work conditions generate vapors or mist, wear a NIOSH approved respirator appropriate for those emission levels. Appropriate respirator may be a full face piece respirator, an SCBA in the pressure demand mode, or a supplied-air respirator.

**Eye Protection:** Chemical splash goggles or full-face shield to prevent eye contact. As a general rule, contact lenses should not be worn when working with chemicals because they contribute to the severity of an eye injury.

**Hand Protection:** Rubber gloves with gauntlets.

**Body Protection:** Use body protection appropriate for task. Chemical-resistant coveralls and rubber aprons are generally acceptable.

**Other Protective Measures:** An eyewash and safety shower should be nearby and ready for use.

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

**Appearance:** Clear, colorless liquid

**Boiling Point:** 104°C

**Odor:** Very slight ammonia odor

**Freezing Point:** -12°C

**pH:** 9.8 to 10.0

**Water Solubility:** 100%.

**Vapor Pressure:** NA

**Density:** 9.1 lbs/gallon.

**Vapor Density (air = 1):** NA.

**Specific Gravity (H<sub>2</sub>O = 1):** 1.087 – 1.093 @ 20°C  
NA = not available

## SECTION 10. STABILITY AND REACTIVITY

**Stability:** Stable under recommended storage conditions

**Conditions to Avoid:** Do not mix with any other chemicals or products.

**Incompatibility:** Avoid contact with strong oxidizers (chlorine, peroxide, chromates, nitric acid, perchlorates, concentrated oxygen, and permanganates) which can generate heat, fire or explosions or release toxic fumes.

**Hazardous Polymerization:** Will not occur.

**Hazardous Decomposition Products:** Oxides of nitrogen, oxides of carbon, and ammonia

## SECTION 11. TOXICOLOGICAL INFORMATION

**Toxicity Data:** Urea LD50 Oral RAT 8471 mg/kg

**Acute Effects:**

**Eyes:** Moderate irritant. May cause redness, burning, inflammation, and/or damage.

**Skin:** Moderate irritant, especially with prolonged exposure. May cause skin ulceration and/or burns.

**Ingestion:** May cause severe gastrointestinal irritation, vomiting, stomach cramps, and diarrhea. May interfere with circulation and oxygen carrying capacity of blood with prolonged exposure.

**Inhalation:** May cause irritation to mucous membranes, coughing, or breathing difficulties. If exposed to decomposition gases remove from area immediately.

**Chronic Effects:** Not Available

## **SECTION 12. ECOLOGICAL INFORMATION**

Ecotoxicity- Freshwater Fish Species Data  
Urea 5713-6 96 Hr LC50 Barillius barna: >9,100 mg/l  
Ecotoxicity- MicroTox Data  
Urea 5713-6 24 Hr EC50 Daphnia magna straus: >10,000 mg/l

## **SECTION 13. DISPOSAL CONSIDERATIONS**

Do not contaminate lakes, streams, ponds, estuaries, oceans, or other waters by discharge of waste effluents or equipment rinsate. Dispose of waste effluents according to federal, state, and local regulations. Chemical additions or other alterations of this product may invalidate any disposal information in this MSDS.

## **SECTION 14. TRANSPORTATION INFORMATION**

This material is not regulated by US DOT for highway transportation.

## **SECTION 15. REGULATORY INFORMATION**

**CERCLA:** A spill or release of this material may trigger the emergency release reporting requirements under CERCLA (40CFR Part 300) and/or SARA Title III (40 CFR Part 355). State and local reporting requirements may differ from federal requirements. Consult for further guidance on your responsibilities under these laws: (urea)

**SARA Reporting Requirements:** SARA, TITLE III, SECTION 313: This product not does contain toxic chemicals subject to the reporting requirements of Section 313, Title III of the Superfund Amendments and Reauthorization Act of 1986.

## **SECTION 16. OTHER INFORMATION**

The information and recommendations herein are taken from data contained in independent industry recognized references including NIOSH, OSHA, ANSI, and NFPA This information is, as of date, listed above, true and accurate to the best of Pure Power LLC knowledge. It is intended for use by persons possessing technical knowledge and at their own discretion and risk. Since actual use is beyond our control, no guarantee, express or implied, and no liability is assumed by Pure Power LLC in conjunction with the use of this information. Actual conditions of use and handling may require consideration of information other than, or in addition to, that which is provided herein.