

# MATERIAL SAFETY DATA SHEET



Conforms to 93/112/EC and ISO 11014-1

## 1. Chemical Product and Company Identification

**Product Name:** UreaGel Diluent

**Product Number:** EC-840

**Chemical Names/**

**Description:**

Aqueous solution of urea

**Manufacturer**

National Diagnostics  
305 Patton Drive  
Atlanta, GA 30336

**Telephone Numbers**

(800) 526-3867  
(404) 699-2121

**Emergency Numbers**

**Chemtrec**

**(800) 424-9300 (U.S. & Canada)**  
**01-703-527-3887 (outside U.S. & Canada)**

## 2. Composition/Information on Ingredients

Component	% Comp.	CAS #	EINECS #	TLV (Units)
Urea	40 - 50	57-13-6	200-315-5	10 mg/m <sup>3</sup> , 8-hour TWA

## 3. Hazards Identification

**Appearance and Odor**

Clear, colorless solution

**EMERGENCY OVERVIEW - IMMEDIATE HAZARD**

CAUSES IRRITATION TO SKIN, EYES, AND RESPIRATORY TRACT. UREA IS HARMFUL IF SWALLOWED OR INHALED.

**EMERGENCY OVERVIEW - CHRONIC HAZARD WARNING:**

LONG-TERM EXPOSURE TO HIGH AIRBORNE CONCENTRATIONS CAN LEAD TO PROTEIN METABOLISM DISTURBANCES, MODERATE EMPHYSEMA, AND CHRONIC WEIGHT LOSS.

**Potential Health Effects**

**Inhalation**

Causes irritation to the respiratory tract.

**Ingestion**

Causes irritation to the gastrointestinal tract.

**Skin**

Causes irritation to the skin.

**Eyes**

Causes irritation to the eyes.

**Signs and Symptoms of Overexposure**

**Inhalation**

Symptoms may include coughing, shortness of breath. May be absorbed into the bloodstream with symptoms similar to ingestion.

**Ingestion**

Symptoms may include nausea, vomiting, and diarrhea. May also cause headache, confusion and electrolyte depletion.

**Skin**

Symptoms include redness, itching, and pain.

**Eyes**

Redness, itching and pain.

**Carcinogenicity**

Not listed as a carcinogen by NTP or IARC.

**Mutagenicity**

No information found.

**Reproductive Toxicity**

No information found.

**Teratogenic Effects**

No information found.

**Routes of Entry**

Ingestion and inhalation.

**Target Organ Statement**

Supersensitive individuals with skin or eye problems, kidney impairment or asthmatic condition should have physician's approval before exposure to urea dust.

**4. First Aid Measures**

**Inhalation**

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

**Ingestion**

Induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person. Call a physician.

**Skin**

Immediately flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse.

**Eyes**

Immediately flush eyes with plenty of water for at least fifteen minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

**5. Fire Fighting Measures**

Flash Point	N.A.	Flammable Limits	N.A.
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Flash Point Method N.A.

Autoignition N.A.  
temperature

### **Extinguishing media**

Use media appropriate to the primary cause of fire.

### **Protective Equipment**

In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

### **Hazardous Combustion Products**

Thermal decomposition products may include toxic oxides of nitrogen and carbon.

### **Unusual Fire and Explosion Hazards**

N.A.

NFPA Codes: Health 1 Flammability 0 Reactivity 0

## 6. Accidental Release Measures

### **Steps to be taken in case material is released or spilled**

Contain and clean up spill immediately, prevent from entering floor drains. Contain liquids using absorbents. Shovel all spill materials into disposal drum. Scrub spill area with detergent, flush with copious amounts of water.

### **Waste Disposal Method**

Disposal must be made in accordance with applicable federal, state, and local regulations.

### **Personal Precautions**

Wear appropriate protective equipment as specified in section 8.

## 7. Handling and Storage

### **Handling**

Avoid contact and inhalation. Do not get in eyes, on skin, on clothing. Wash thoroughly after handling.

### **Storage**

Keep in a tightly closed container, stored in a cooled, dry, ventilated area.

### **Storage Temperature**

Room Temperature

### **Disposal**

Observe all national, state, and local regulations regarding disposal.

## 8. Exposure Controls/Personal Protection

### **Airborne Exposure Limits**

Component: Urea

ACGIH Threshold Limit Value (TLV): 10 mg/m<sup>3</sup>, 8-hour TWA

OSHA Permissible Exposure Limit  
(PEL): not available

### **Engineering Controls**

A system of local and/or general exhaust is recommended to keep employee exposures below the Airborn Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source.

## Respiratory Protection

For conditions of use where exposure to the dust or mist is apparent, a full-face dust/mist respirator may be worn. For emergencies or instances where the exposure levels are not known, use a full-face positive-pressure, air-supplied respirator.

## Eye Protection

Use chemical safety goggles and/or a full face shield where splashing is possible. Maintain eye wash fountain and quick-drench facilities in work area.

## Skin Protection

Wear protective gloves and clean body covering clothing.

## Other Control Measures

N.A.

## 9. Physical Properties

<b>Boiling point</b>	220 F	<b>Evaporation Rate</b>	1.0
<b>Melting point</b>	N.A.	<b>Solubility in water</b>	Soluble
<b>Vapor pressure (mmHg)</b>	Water	<b>pH</b>	Neutral
<b>Vapor density (Air = 1)</b>	N.A.	<b>Specific gravity (H<sub>2</sub>O = 1)</b>	1.13
<b>% volatile by volume</b>	50		

## 10. Stability and Reactivity

### Stability

Stable under ordinary conditions of use and storage. If moisture is present, boric acid can be corrosive to iron.

### Conditions to Avoid

Heat, incompatibles.

### Hazardous Decomposition Products

Urea decomposes upon heating and can form products including ammonia, oxides of nitrogen, cyanuric acid, cyanic acid, biuret, and carbon dioxide.

### Hazardous Polymerization

Will not occur

### Incompatibles

Urea:

Urea reacts with calcium hypochlorite or sodium hypochlorite to form the explosive nitrogen trichloride.

It is incompatible with sodium nitrite, gallium perchlorate, strong oxidizing agents (permanganate, dichromate, nitrate, chlorine), phosphorus penta

## 11. Toxicological Information

### Product LD50 Values

UreaGel Diluent Oral Rat LD50 (mg/kg): 18224  
UreaGel Diluent Dermal Rabbit LD50 (mg/kg): Not available

### Component Cancer List Status

	NTP Carcinogen		IARC Category
	Known	Anticipated	
Urea	No	No	None

## 12. Ecological Information

### Urea

When urea is released to soil, this material will hydrolyze into ammonium in a matter of days to several weeks. When released into the soil, this material may leach into groundwater. When released into water, this material may biodegrade to a moderate extent. When released into water, this material is not expected to evaporate significantly. This material has an experimentally determined bioconcentration factor (BCF) of less than 100. This material is not expected to significantly bioaccumulate. When released into the air, this material is expected to be readily degraded by reaction with photochemically produced hydroxyl radicals. When released into the air, this material is expected to have a half-life of less than 1 day.

## 13. Disposal Considerations

Observe all national, state, and local regulations regarding disposal.

## 14. Transport Information

### D.O.T.

Proper Shipping Name: Not Regulated

Hazard Class: N.A.

UN Number: N.A.

Packing Group: N.A.

### I.A.T.A.

Proper Shipping Name: Not Regulated

Hazard Class: N.A.

UN Number: N.A.

Packing Group: N.A.

### I.M.O.

Proper Shipping Name: Not Regulated

Hazard Class: N.A.

UN Number: N.A.

Packing Group: N.A.

## 15. Regulatory Information

### United States

#### TSCA Regulatory Statement

All intentional ingredients are listed on the TSCA Inventory.

**SARA 311/312 Hazard Categories**

Component	Fire	Pressure	Reactivity	Acute	Chronic
Urea	No	No	No	Yes	Yes

**Europe****EEC Regulatory**

All intentional ingredients are listed on the European EINECS Inventory.

## 16. Other Information

**NFPA Codes: Health 1 Flammability 0 Reactivity 0**

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