



# Material Safety Data Sheet

Safety & Training  
Department

Urea



## PRODUCT IDENTIFICATION

Product Name: Urea, Carbamide; Amide of Carbonic Acid

CAS No: 57-13-6

## MANUFACTURER'S INFORMATION

Manufacturer: Dawood Hercules Chemicals Limited.

Address: 28-Km Sheikhpura Road, Sheikhpura,  
Lahore Pakistan.

Telephone No: (092-42) 7352762-67

Fax No: (092-42) 6360343

E-mail: info.dh@dawoodgroup.com

## PRODUCT INFORMATION

Chemical Name and Synonyms:  
Family Amide Chemical Formula: Urea; Carbamide; amide of Carbonic acid Chemical  
CO (NH<sub>2</sub>)<sub>2</sub>

Product Use: Fertilizer

## PHYSICAL DATA

Physical State: Solid

Odour and Appearance: White beads or crystals, mild odour

Boiling Point (°C): 135 (Decomposes)

Melting Point (°C): 133

PH: 7.2 (10% aqueous solution)

Specific Gravity: 1.335

Coefficient of Water / Oil distribution: log P=-3.82

Solubility: 1g in 1ml water

## REACTIVITY DATA

Chemical Stability: Stable

Incompatibility with other substances: Strong oxidizing agents such as nitric acid,  
hypochlorites, sodium nitrite, phosphorus  
pentachloride.

Reactivity: Avoid extreme heat.

Hazardous Decomposition Products: CO<sub>x</sub>, ammonia, NO<sub>x</sub>.

## **FIRE AND EXPLOSION DATA**

Flammability:	Not combustible.
Extinguishing Media:	Use CO <sub>2</sub> , Dry Chemical, or Water type fire extinguishers.
Hazardous Combustion Products:	CO <sub>x</sub> ammonia, NO <sub>x</sub> .

## **TOXICOLOGICAL PROPERTIES**

### Effects of Acute Exposure to Product:

Inhaled:	Inhalation may cause sore throat, sneezing, coughing, shortness of breath. Assumed harmful.
In Contact with Skin:	May cause rash.
In Contact with Eye:	Irritating to eyes.
Ingested:	Has a low order of toxicity after ingestion. may cause gastrointestinal irritation with nausea and vomiting.

## **PREVENTATIVE MEASURES**

Engineering Controls:	Local exhaust ventilation recommended.
Respiratory Protection:	Dust mask. Fume-hood.
Eye Protection:	Chemical safety glasses.
Skin Protection:	Protective gloves. Wear other protective clothing s necessary to prevent skin contact. Other Personal Protective Equipment: Safety shower and eye wash fountain in work area.
Leak and spill Procedure:	Ventilate area of spill. Sweep up material and place in a waste disposal container. Avoid raising dust. Flush area with water. For small spills, flush area thoroughly with water and run to sewer.
Waste Disposal:	Dispose in accordance with federal, provincial, state, and local regulations on chemical waste disposal.
Handling Procedures and Equipment:	Follow routine safe handling procedures. Maintain good housekeeping to control dust accumulations.
Storage Requirements:	Store in a cool, dry, well-ventilated place away from incompatible materials. Keep tightly closed.

## **FIRST AID MEASURES**

### Specific Measures:

Eye:	Flush thoroughly with running water for ten (10) to fifteen (15) minutes, holding eyelids open while flushing. If irritation persists, get medical attention.
Skin:	Wash affected areas of skin thoroughly with soap and water. If irritation develops, get medical attention.
Inhalation:	Breathe fresh air. Give oxygen for any breathing difficulty. Get medical attention.
Ingestion:	If casualty is alert and not convulsing, give 1 to 2 glasses of water to dilute. Treat symptomatically.