

### Urea (Carbamide)



**Urea** or **carbamide** is an organic compound with the chemical formula  $\text{CO}(\text{NH}_2)_2$ . The molecule has two  $\text{—NH}_2$  groups joined by a carbonyl ( $\text{C}=\text{O}$ ) functional group.

**Urea** serves an important role in the metabolism of nitrogen-containing compounds by animals and is the main nitrogen-containing substance in the urine of mammals. It is solid, colourless, and odorless (although the ammonia that it gives off in the presence of water, including water vapor in the air, has a strong odor). It is highly soluble in water and practically non-toxic (LD50 is 15 g/kg for rat). Dissolved in water, it is neither acidic nor alkaline. The body uses it in many processes, the most notable one being nitrogen excretion. Urea is widely used in fertilizers as a convenient source of nitrogen. Urea is also an important raw material for the chemical industry. The synthesis of this organic compound by Friedrich Wöhler in 1828 from an inorganic precursor was an important milestone in the development of organic chemistry, as it showed for the first time that a molecule found in living organisms could be synthesized in the lab without biological starting materials (thus contradicting a theory widely prevalent at one time, called vitalism).

**We Offer you the best quality of Iranian Granular or Prilled Urea 46% and Sulfur Coated Urea (SCU).**

For more information, please [contact](#) Hamid Asadi.

## Properties

Quantity / Description	Unit	
Spherical shape		
Melting point	°C	around 132
Molecular weight	amu	60

## Specifications

### GRANULAR UREA SPECIFICATIONS

Quantity	Unit	
Total Nitrogen	wt %	46 min
Biuret content	wt %	1% max
Formaldehyde (HCHO)	wt %	0.45 min
Crushing strength	kg	2 min
Moisture	wt %	0.5 max
Particle size	wt %	

2-4 mm ..... 90% min  
> 4 mm ..... 7% max  
+2.8 mm ..... 60% min

### PRILLED UREA SPECIFICATIONS

Quantity	Unit	
Total Nitrogen	wt %	46 min
Biuret content	wt %	≤ 1.0
Moisture	wt %	≤ 0.5
Particle size	wt %	1-2.8 mm ..... 90% min

### SPECIFICATIONS OF SULFUR COATED UREA (SCU)

Total Nitrogen	36%
Sulfur	15%
Additive	5%
Moisture	0.5%
Main Size 2-4 mm	98%