

PRILLED UREA 46-0-0

Description

Low Biuret Prilled Urea is a high-purity nitrogen fertilizer produced through the reaction of ammonia and carbon dioxide. The product is manufactured as a white, free-flowing prilled (spherical) solid and typically contains a small amount of conditioning or anti-caking agent to enhance handling and storage characteristics. Low biuret grades are specifically designed for applications where reduced biuret concentrations in prilled urea are less than 0.5%.

Uses

- As a nitrogen fertilizer applied direct to the soil or through irrigation systems
- As a nitrogen supplying component in the manufacture of various grades of liquid or suspension solutions
- For melting snow on airport runways
- Cattle feed
- Pharmaceuticals
- NOx control systems

Handling and Storage

Storage buildings may be constructed of wood, concrete, or steel. The building design should account for the material's angle of repose to ensure adequate storage capacity and safe handling conditions. Material handling can be accomplished using conventional plant equipment such as conveyor belts, bucket elevators, slingers, and front-end loaders.

Shipping

Urea shipments will be made in 2000 lb super sacks or 50 lb bags. Bulk shipments will be made in trucks. Urea is not listed on the U.S. Department of Transportation Hazardous Materials table.

Environmental Considerations

Urea spillage should be contained and not permitted to reach run-off drainage ditches or sewer systems by dissolving in rain or wash water.



Chemical & Physical Properties

Chemical Formula	CO(NH ₂) ₂
CAS Number	57-13-6
Molecular Weight	60.056
Melting Point	271°F (132.8°C)
Color	White
Odor	May have slight ammonia smell
Density	44 – 48 lb/ft ³ (704.8 - 768.9 kg/m ³)
pH, 10% Solution @ 68°F (20°C)	6.5 – 8.5

Typical Analysis

Total Nitrogen, as N, wt%	46.0
Conditioner, as Methyl-enediurea (MDU), wt%	1.76
Biuret, wt%	< 0.5
Angle of Repose, degrees	28°
Alkalinity, as Ammonia ppm	150
Moisture, as H ₂ O, wt%	0.4
Size Range, Tyler Mesh, Wt. %: -6 / +16m, 1 / 3.35mm	95% min
Size Guide Number - Range	185 - 215
Size Guide Number - Avg	203

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TradeMark Nitrogen Corp.

1216 Old Hopewell Road
Tampa, Florida 33619 USA
www.trademarknitrogen.com
813 626 1181