

UREA SOLUTION - 60%

Description

Liquid Urea is a crystal clear 60% aqueous solution of urea. Its main advantage over conventional granular urea is labor savings and lower biuret content.

Uses

- In the manufacture of liquid feed supplement for ruminant animals
- In plywood and coreboard adhesives
- Textile processing and coatings
- In some paper coatings
- In the manufacture of some liquid fertilizers to lower the salting out temperature

Handling and Storage

Capacity of storage tanks should be at least 5,000 gallons for truck delivery and 12,000 gallons for rail delivery. Tank materials satisfactory for liquid urea storage are aluminum and stainless steel. Steel tanks should not be used since urea solutions are mildly corrosive to steel and will result in iron contamination. Epoxy and polyester lined tanks are also not recommended because these materials are susceptible to ammonia attack. Copper and copper alloys should be avoided in any equipment, fittings or lines carrying liquid urea. Outdoor storage tanks should be insulated and have provisions for heating. The temperature should be maintained above 92.5°F to prevent salting out and below 111°F to prevent hydrolysis. For specific customer problems and questions, TradeMark stands ready to provide individual assistance.

Shipping

Bulk shipments only in 5,000 gallon tank trucks or 18,000 gallon tank cars. The US Dept of Transportation does not list Urea as hazardous.

Environmental Considerations

Liquid urea spillage should be contained. Dams around tanks must be constructed to contain leaks. Wash water should not be permitted to enter sewers or streams.



Chemical & Physical Properties

Chemical Formula	CO(NH ₂) ₂
CAS Number	57-13-6
Specific Gravity	1.156 @96°F (35.6°C)
pH	6.5 – 8.5
Salt-Out Temp	96°F (35.6°C)
Color	Colorless
Odor	May have slight ammonia smell
Weight per Gallon	9.64 lbs/gal @96°F (1.16 kg/L @35.6°C)
Gallons per Ton	207.46 @96°F (0.87 L/kg @35.6°C)

Typical Analysis

Urea	60%
27.6% Nitrogen	
Turbidity	5 ppm
pH - Max	8.5
Ammonia	0.03%
Biuret	< 0.30%
Ash	35 ppm
Iron	2 ppm
Chloride	10 ppm
Color - Max	0 (APHA)
Alkalinity - wt (NH ₃) Max	0.05%

The data presented herein are believed to be accurate but are in no way guaranteed. TradeMark Nitrogen Corp. makes no warranties, express or implied, that any of the above data is fit for any particular use and expressly disclaims all oral warranties of any kind.

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