

Granular Feed Grade Urea

46-0-0 $\text{CO}(\text{NH}_2)_2$

Urea is an inorganic compound found in nature. Thanks to its technology Belle Plaine produces technically pure Feed Grade Urea from the synthesis of natural gas and nitrogen found in the air. Feed Grade urea is a solid white micro-granule with an even round shape. Non-protein nitrogen (NPN) compounds can be used to supplement the diets of ruminants across a range of feed strategies.

Protein is a major limiting nutrient for current animal production. Feed Grade Urea is a non-protein nitrogen (NPN) source for ruminants. Microbes in the rumen metabolize NPN compounds to produce ammonia and use this ammonia for microbial protein synthesis, that will be available for absorption through the gastrointestinal tract.

| | Typical Analysis | Limiting Values |
|-------------------|-------------------------|------------------------|
| Total Nitrogen | 46.3% | 46.0% minimum |
| Biuret | 1.0% | 1.2% maximum |
| Eq. Crude Protein | 288.13% | 287.5% maximum |
| Moisture | 0.15% | 0.3% minimum |

| Physical Properties | Approximate |
|----------------------------|---|
| Bulk Density (comp.) | 45 lbs/ft ³ (720 kg/m ³) |
| Angle of Repose | 25° |
| Size Guide Number (SGN) | 120-160 |

Directions for Use

Urea shall only be fed to animals with a functional rumen. Feeding urea to the maximum level dose should be done gradually. The maximum content of urea should be only fed as part of diets rich in easily digestible carbohydrates and low in soluble nitrogen. A maximum 30% of total nitrogen in the daily ration should come from urea-N.



Handling and Storage

- Solid urea is hygroscopic. To minimize the formation of lumps and cakes of urea, it is recommended to:
- Store urea in the range 10 - 30 °C, with relative humidity below and close to 70%.
- Storage temperature must be as stable as possible.
- Minimize storage height.
- Avoid loading product during rain.
- Reduce fall height when handling product in bulk to minimize dust formation.
- When stored in silo: silo should be easy to enter if necessary to remove lumps/cakes. Silos stored outside should be insulated and kept at sufficiently high temperature.

When handled and stored according to instructions shelf life is one year.