

UREA SOLUTION

Technical
Information



Aqueous NO_x Abatement Solution—32.5% & 40%

Product Description

The UREA SOLUTION is created by dissolution of the pure amide directly into clean condensate so there are no ions of any metals present. The lowest salt-out temperature possible for UREA solution is 12°F at a 32.5% UREA concentration. The 40% UREA solution has a salt-out temperature of 32°F.

Application Recommendations

- UREA solutions are marketed as ultra clean liquid fuel for catalytic abatement of nitrogen oxide emissions.
- The decomposition of UREA solution into ammonia, carbon dioxide and steam provides a safe way to produce the ammonia fuel source. There is no need to have containers of compressed liquid ammonia in remote locations that are difficult to secure.
- Consult your Dyno Nobel representative for additional information.

Transportation, Storage and Handling

- The transport of UREA solution does not require a DOT placard.
- UREA solution will decompose into ammonia, carbon dioxide at 275 °F.
- **ALWAYS** thoroughly wash vessels containing UREA solution before attempting repairs requiring welding.

Hazardous Shipping Description

- There are no DOT restrictions, other than weight, to transport UREA solutions.
- Consult SDS #1135 for more specific and comprehensive information about chemical hazards.

Properties

SDS
#1135

UREA % by weight	32.0 to 33.0	39.5 to 40.5
Water % by weight maximum	67.0 to 68.0	59.5 to 60.5
Biuret % by weight maximum	0.3	0.3
Free Ammonia % by weight maximum	0.1	0.1
Carbonate (as CO₂) % by weight	0.1	0.1
pH	8.0 – 10.0	8.0 – 10.0
Salt-out Temperature (open vessel)	~12°F	~32°F
Storage Temperature	40 to 80°F	40 to 80°F
Weight @ 68°F	9.1 lbs/gallon	9.4 lbs/gallon
Calcium maximum	0.5 ppm	0.5 ppm
Chromium maximum	0.5 ppm	0.5 ppm
Copper maximum	0.5 ppm	0.5 ppm
Iron maximum	0.5 ppm	0.5 ppm
Magnesium maximum	0.5 ppm	0.5 ppm
Nickel maximum	0.5 ppm	0.5 ppm
Phosphorus maximum	0.5 ppm	0.5 ppm
Potassium maximum	0.5 ppm	0.5 ppm
Silica maximum	1.0 ppm	1.0 ppm
Sodium maximum	0.5 ppm	0.5 ppm
Zinc maximum	0.5 ppm	0.5 ppm

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NSH-15-08-18-15

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