DEF

Technical Information

Diesel Exhaust Fluid / UREA Solution 32.5%

Product Description

DEF (Diesel Exhaust Fluid) Urea Solutions are produced by combining pure liquid urea from the urea process with clean plant steam condensate to produce the desired concentration. The resulting DEF solution is free of any chemical additives such as formaldehyde.

DEF is effective in controlling the emission of nitrogen oxides from stationary sources such as power plants as well as from diesel powered cars, trucks, trains, ships and heavy equipment. DEF is non-toxic, non-hazardous and formaldehyde free. DEF complies with AUS 32 and ISO 22241-1 specifications.

Application Recommendations

- DEF is marketed as ultra clean liquid fuel for catalytic abatement of nitrogen oxide emissions.
- The decomposition of DEF 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 DEF does not require a DOT placard.
- DEF will decompose into ammonia, carbon dioxide at 275° F (135° C).
- **ALWAYS** thoroughly wash vessels containing DEF before attempting repairs requiring welding.

Hazardous Shipping Description

- There are no DOT restrictions, other than weight, to transport UREA solutions.
- Consult MSDS #1020 for more specific and comprehensive information about chemical hazards.

Properties

SDS #1135

UREA % by weight	31.8 - 33.2
Alkalinity as NH_3 % by weight maximum	0.2
Biuret % by weight maximum	0.3
Insolubles, ppm maximum	20
Aldehyde, ppm maximum	5
Phosphate (PO_4), ppm maximum	0.5
Aluminum, ppm maximum	0.5
Calcium, ppm maximum	0.5
Iron, ppm maximum	0.5
Copper, ppm maximum	0.2
Zinc, ppm maximum	0.2
Chromium, ppm maximum	0.2
Nickel, ppm maximum	0.2
Magnesium, ppm maximum	0.5
Sodium, ppm maximum	0.5
Potassium, ppm maximum	0.5
Density at 68° F (20° C), lbs/gallon	9.07 - 9.12
Refractive Index at 68° F (20° C)	1.3814 - 1.3843
Salt-Out Temperature, ° F (° C)	12 (-11)
Recommended Storage Temperature, ° F (° C)	40 - 80 (4.5 - 26.6)

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