50% DEF Urea Solution

Diesel Exhaust Fluid

columbia river nitrogen llc

Product Description –

Columbia River Nitrogen's 50% Diesel Exhaust Fluid is produced by combining pure liquid urea from the urea process and pure water from a reverse osmosis system and/or clean plant steam condensate. The resulting urea solution is high-purity and free of any chemical additives such as formaldehyde. Our DEF meets calculated ISO 22241 standards and undergoes regular quality testing by our in-house laboratory as well as an independent third-party laboratory.

Properties SDS#1135

	Min.	Max.
Urea Content (% wt.)	49.0	50.2
Alkalinity as NH3, (% wt.)	n/a	0.31
Biuret, (% wt.)	n/a	0.46
Aldehydes, (mg/kg)	n/a	7.7
Insoluble Matter, (mg/kg)	n/a	30.8
Phosphate, (mg/kg)	n/a	0.77
Calcium, (mg/kg)	n/a	0.77
Iron, (mg/kg)	n/a	0.77
Copper, (mg/kg)	n/a	0.31
Zinc, (mg/kg)	n/a	0.31
Chromium, (mg/kg)	n/a	0.31
Nickel, (mg/kg)	n/a	0.31
Aluminum, (mg/kg)	n/a	0.77
Magnesium, (mg/kg)	n/a	0.77
Sodium, (mg/kg)	n/a	0.77
Potassium, (mg/kg)	n/a	0.77

Applications & Uses

Diesel Exhaust Fluid is a high-quality urea solution that is needed for selective catalytic reduction (SCR) converters in diesel engines to reduce NOx gas emissions.

50% DEF can also be used in diesel boilers.

In terms of storage, urea is a safer alternative to ammonia for NOx reduction and the higher urea concentration in our 50% DEF can allow for less storage volume needed.

Storage & Handling

Recommended Storage Temperature: 65-85°F (18.3-29.4°C)
Salt-out Temperature: 64°F (18°C)
It's recommended that 50% DEF be kept above 64°F (18°C) and regularly circulated to avoid solidifying. Solidified DEF has a larger volume than liquid DEF, which could cause fully filled, closed containers to burst.

To avoid potential contamination that could affect SCR systems, ISO 22241 recommends not using copper, copper-containing alloys non-alloyed steels, and zinc-coated steels for container materials. For best practice recommendations and requirements for DEF storage, see ISO-22241 Part 3: Handling, transportation and storage.

For more information, see the safety data sheet.

For detailed specifications, safety data sheets, or application guidance please contact us at: columbiarivernitrogen.com