Diesel Exhaust Fluid (DEF)

Description

Diesel Exhaust Fluid (DEF) is one of the key elements of the selective catalytic reduction (SCR) process. It is a nontoxic solution of 67.5% deionized water and 32.5% urea. DEF is stable, colorless, odorless and meets all international standards for purity and composition.

SCR reduces NO_X through a basic chemistry process that is simple, extremely efficient, very reliable and safe. The major components to this process are vaporized DEF and hot diesel exhaust. When these components enter the catalytic converter, catalysts in the converter accelerate a chemical reaction, reducing harmful emissions. Catalysts are common in everyday life; for example, gasoline-powered vehicles have used catalytic converters for decades now.

Features and Benefits

- Complies with ISO-22241-1 Quality Standard specification.
- High purity urea solution for treatment of SCR-equipped diesel engines.
- Nonflammable, nonhazardous, nontoxic and non-explosive
- DEF is a chemical product, not a petroleum product.

Typical Properties

Specification	Limits
Urea, wt. %	31.8 – 33.2% (m/m)
Density / Specific Gravity @ 20°C	1087.0 – 1093.0
Appearance	Colorless Liquid

Recommended Usage

DEF is being used more and more as engine manufacturers comply with 2010 EPA emission standards requiring medium and heavy-duty trucks to reduce NO_X emissions.

DEF is stored in saddle tanks and injected into hot exhaust as a fine mist. The addition of DEF converts harmful NOX into nitrogen gas and water vapor, two harmless chemicals we breathe every day. Trucks now have gauges informing the driver when they are low on DEF.

Storage and Handling

- Optimal storage temperature is 23°F to 86°F.
- Avoid direct exposure to sunlight.
- Ensure good ventilation at the workplace. Avoid prolonged or repeated skin contact. Avoid contact with eyes.
- Material safety data sheet containing detailed information about this product is available upon request.

Shelf Life

24 months when following recommended Storage and Handling guidelines.

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Subject to change without notice