DIESEL EXHAUST FLUID

WHAT IS Diesel Exhaust Fluid?

Diesel Exhaust Fluid (DEF) is an aqueous solution used in Selective Catalytic Reduction (SCR) systems to lower NOx (Nitric Oxide) concentrations in the exhaust emissions. DEF is a mixture of 32.5% high purity urea and 67.5% deionized water.

DEF is a stable, colourless, non-toxic, non-polluting, and non-flammable substance and is classified as minimum risk for transportation. Blue Sky DEF conforms to ISO 22241 specifications and meets or exceeds OEM specifications. Diesel engine NOx reduction agent AUS 32.

DEF HANDLING AND STORAGE

DEF will begin to freeze at -11°C (12°F). If DEF freezes, its efficiency will not be affected upon thawing. The shelf life of DEF is directly related to the temperature at which it is stored. Storage between -11°C (12°F) and 32°C (90°F) will give the optimal shell life and if the maximum temperature does not exceed approximately 24°C (75°F) for an extended period of time, a shell life of up to two years could be realized.

DO'S AND DON'TS FOR PROPER USE OF DEF

- DO fill DEF in designated DEF Tank
- DO keep DEF dispense equipment clean, and free from dust or dirt
- DO use only dedicated DEF equipment when handling/dispensing DEF
- DO NOT fill DEF into Diesel Fuel Tank
- DO NOT fill Diesel into DEF Tank
- DO NOT add water to DEF

MATERIALS RECOMMENDED FOR USE WITH DEF
Highly alloyed austenitic Cr-Ni-Mo Steels or Stainless Steel 304 (S30400), 304L (S30403), 316 (S31600) and 316L (S31603) in accordance with ASTM A240, ASTM A276, and ASTM A312.
Titanium
Ni-Mo-Cr-Mn-Cu-Si-Fe Alloys, e.g. Hastelloy c/c-276
Polypropylene, free of additives
Polyethylene, free of additives
Perfluoroalkoxyl Alkane (PFA), free of additives
Polyfluroroethylene (PFE), free of additives
Polyvinylidenefluoride (PVDF), free of additives
Polytetrafluoroethylene (PTFE), free of additives
Copolymers of Vinylidenefluoride and Hexafluoropropylene, free of additives

MATERIALS NOT RECOMMENDED FOR USE WITH DEF
Carbon Steels, Zinc Coated Carbon Steels, and Mild Iron
Non ferrous metals and alloys: Copper, Copper Alloys, Zinc, Lead
Solders containing, Lead, Silver, Zinc and Copper
Aluminum, Aluminum Alloys
Magnesium, Magnesium Alloys
Plastics or metals coated with Nickel

PHYSICAL AND CHEMICAL PROPERTIES	
Boiling Point	> 100°C (212°F)
Salt Out Temperature	-11°C (12°F)
Density @ 20°C (68°F)	1.09
Vapour Density (Air=1)	0.6 H20, >1
Appearance	Colourless, clear liquid
Odour	None to slight ammonia
Evaporation Rate	<1
Refractive Index 20°C (68°F)	1.3823
Alkalinity as NH3	<0.1 weight %
Biuret	<0.3 max