

# Signature® Diesel Exhaust Fluid

## Product Data Sheet

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### WHAT IS DEF?

Signature® DEF is a mixture of 32.5% high purity synthetic urea and 67.5% deionized water that is used in Selective Catalytic Reduction(SCR) systems on diesel engines. DEF is the primary ingredient used to help convert NOx to harmless nitrogen and water. DEF is stable, colorless, non-flammable, non-toxic and is classified as minimum risk for transportation. DEF conforms to the ISO-22241-1 specification for DEF, is API registered and meets or exceeds OEM specifications.

### DEF HANDLING AND STORAGE:

The shelf life of DEF is directly related to the temperature at which it is stored. Storage temperature between 12° and 86° F are recommended to maintain optimal shelf life of up to two years. If DEF freezes, its efficacy will not be effected upon thawing. To maintain the purity of DEF and not harm the SCR Catalyst System care must be taken regarding the material of construction for all items that come in contact with the DEF solution. Included from the ISO-22241-1 standards are the recommended and not recommended materials for contact with DEF.

### SIGNATURE DEF PHYSICAL AND CHEMICAL PROPERTIES:

- Boiling Point > 212° F
- Crystallization Point 12° F
- Pounds/Gallons 9.09
- Odor – None to slight ammonia
- Evaporation Rate <1
- Specific Gravity (Water =1) 1.09
- Vapor Pressure (mm of Hg) Not applicable
- Water Solubility 100%
- Appearance – Colorless, clear liquid

### 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
- Polyfluroethylene (PFE), free of additives
- Polyvinylidene fluoride (PVDF), free of additives
- Polytetrafluoroethylene (PTFE), free of additives
- Copolymers of Vinylidene fluoride and
- Hexafluoropropylene, free of additives