



TECHNICAL DATA

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138CI CETANE IMPROVER

Description

138CI Cetane Improver is a diesel fuel additive that is used to increase the cetane number rating of diesel fuels.

Benefits

138CI Cetane improver when added to the fuel will provide the following performance benefits:

- Improved cold weather starting
- Reduced fuel consumption
- Reduced emissions
- Less white smoke
- Reduced warm-up time
- Reduced misfiring at low air inlet temperatures
- Reduced engine noise and knocking
- Improved engine durability
- Allowance for the blending of low cetane stocks such as light cycle oil into the diesel fuel
- Cetane improvement during refinery upsets to meet desired specifications

Materials Compatibility

304 and 316 stainless steel, Monel 400 and Nickel 200 are the preferred materials of construction to ensure integrity and maintain product quality of 138CI Cetane Improver. Mild steel tanks may be used only with careful monitoring of tank bottoms. If water is allowed to accumulate in the bottom of mild steel tanks, 138CI Cetane Improver can hydrolyze slowly to form nitric acid and increase the corrosion rate of the mild steel. 138CI Cetane Improver can degrade the performance of some seals and gaskets. PDVF, HDPE, FRP (Vinyl), AFLAS, Graphite, Polysulfide, Viton-A and Teflon are recommended for thermoplastics, elastomers, and gasket materials. Copper, brass or bronze (yellow metals) should not be used in pumps, valves, bearings, or other internal components that may come into contact with the neat additive.

TD-138CI (10/2010)

Storage and Handling

Do not heat the product. Self sustaining exothermic decomposition of 138CI Cetane Improver begins at 212°F (100°C). There is a risk of explosion if heated under confinement. Please refer to the CEFIC Best Practice Manual prepared by the 2EHN Industry Work Group (ATC Document 76) for product safety and handling. This document provides background information on thermal stability and safe handling of 2-Ethylhexyl Nitrate and also describes, safe unloading of equipment from bulk containers and product safety and handling information.

Recommended Treatment Range

0.05 to 0.5% by volume of fuel

0.5 to 5 gallons per 1000 gallons of fuel

21 to 210 gallons per 1000 bbls of fuel

0.4835 to 4.835 kgs per 1000 liters of fuel

0.4835 to 4.835 Metric tones per million liters of fuel

138CI Cetane Improver is registered for use and meets the US EPA requirements for blending into low sulfur and ultra low sulfur diesel fuels. When used at the recommended treatment ratio, 138CI Cetane Improver will not have any measurable affect on the aromatic and sulfur content of the diesel fuel. The sulfur content of 138CI does not exceed 15 ppm.

Typical Properties

Appearance	Light straw color liquid
Specific Gravity @ 60°F (15.6°C)	0.967
Density lbs/gal @ 60°F (15.6°C)	8.08
Color ASTM D-1500	0.5
Total Acid Number mg KOH/g	0.04
Vapor Pressure	
Pa @ 68°F (20°C)	27
Pa @ 104°F (40°C)	40-53
kPa @ 179.6°F (82°C)	1.33
Boiling Point °F/°C	Decomposes >212°/>100°
Flash Point °F/°C, TCC	174°/79°
Pour Point °F/°C	<-40°/<-40°
Viscosity cSt @	
100°F/38°C	1
32°F/0°C	3
0°F/-18°C	5
-20°F/-29°C	7