



TECHNICAL DATA

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137SUM DIESEL TREAT 2000™ ULTRA LOW SULFUR

Application

137SUM Diesel Treat 2000™ Ultra Low Sulfur is a multi-functional, ultra low sulfur complaint, all season economical premium fighting grade diesel fuel additive that is specifically formulated to provide improved fuel efficiency, increased power, increased fuel lubricity, improved injector cleanliness, improved protection against moisture and improved fuel stability.

137SUM Diesel Treat 2000™ Ultra Low Sulfur can also be used in all types of diesel fuel including low sulfur diesel fuel and biodiesel blends.

Feature and Benefits

137SUM Diesel Treat 2000™ Ultra Low Sulfur contains a highly concentrated multi-functional additive package, which allows the product to provide the following performance benefits, when used at the recommended treatment ratio:

1. Improvement of the fuels cetane rating up to four points.
2. Easier cold weather starting.
3. Reduced misfiring at lower air inlet temperatures.
4. Faster warm-up.
5. Superior Cummins L-10 Injector Depositing Test and Cummins N-14 Injector Corrosion Test Performance.
6. Detergency to provide cleanliness throughout the entire fuel system.
7. Clean up and keep clean performance for the entire fuel system.
8. Dispersion of insoluble gums and varnish present in low quality fuels.
9. Excellent deposit control for light duty and medium duty in-direct injected diesel engines.
10. Improved combustion of the fuel by completely vaporizing the fuel into smaller particles, thus providing better fuel economy and preventing a significant loss in engine power.
11. Improved fuel economy up to 5%.

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12. Modification of existing injector deposits, allowing for their removal and safe passage into the combustion chamber where they can be burned
13. Reduced emissions exhaust smoke and particulates.
14. A reduction in black smoke.
15. Excellent anti-wear protections for injectors and fuel pumps, especially for those engines burning low sulfur diesel fuel and ultra low sulfur diesel fuel.
16. Supplemental ring and valve-train anti-wear protection.
17. Lubrication of the upper cylinders, fuel pumps and injectors
18. Increased thermal stability to the diesel fuel in order to provide the ability to resist thermal degradation.
19. Inhibition of oxidation during storage.
20. Extended storage stability.
21. Rust and corrosion protection to the entire fuel system.

Coupled with this multifunctional additive package is a non-alcohol jet fuel deicer/water dispersant. This non-alcohol jet fuel deicer/water dispersant eliminates the problems associated with entrained and/or dissolved water present in the fuel by dispersing the water into tiny droplets. These tiny droplets are suspended in the fuel so they can be carried with the fuel in controlled amounts through the fuel filters, fuel lines, and into the combustion chamber to be burned with the fuel. By having any remaining water dispersed and suspended in the fuel, 137SUM Diesel Treat 2000™ Ultra Low Sulfur prevents the formation of stable fuel-water emulsions.

Increased Lubricity Protection with SynShield®

Today's diesel powered vehicles feature low emission engines that are more susceptible than ever to diesel fuel related wear. Diesel engine designs are employing the use of higher fuel injection pressures, hotter fuel return temperatures, higher operating temperatures and complex engine geometry to control emissions. All of these factors result in increased fuel system wear and can shorten engine life.

With the mandate by the United States EPA to reduce the sulfur content of diesel fuels to control emissions, this has resulted the elimination of certain naturally occurring polar compounds that aid in protection of the fuel system from wear by forming a protective layer on the metal surfaces of the fuel injection system. The increased use of the hydrotreating and hydrocracking refining processes to reduce the sulfur content of the diesel fuel in order to meet the mandated **the Ultra Low Sulfur Diesel Fuel specification of 15 ppm** causes these naturally occurring polar compounds to become either chemically altered or completely removed, thus resulting in increased engine and fuel system wear.

To protect today's diesel engines from fuel system related wear Schaeffer Mfg has further blended into the 137SUM Diesel Treat 2000™ Ultra Low Sulfur is a proprietary lubricity additive called SynShield®. SynShield® is one of the few lubricity additives that not only surpasses industry standards for diesel fuel lubricity but also exceeds the EPA's new standard by being the only lubricity additive that does not contain sulfur or sulfur containing compounds. SynShield® prevents fuel system wear and injector scoring by forming a protective layer on the metal surfaces of the fuel system and injectors that provide boundary lubrication between metallic parts in critical fuel system components. This protective boundary lubrication film not only reduces friction and wear between the fuel system surfaces that are in relative motion but also increases fuel system component life, thus leading to less downtime and increased longer equipment life

TREATMENT RATIO:

One gallon of 137SUM Diesel Treat 2000™ Ultra Low Sulfur to every 4000 gallons of diesel fuel.

137SUM Diesel Treat 2000™ Ultra Low Sulfur is registered and meets US EPA requirements for blending into low sulfur diesel fuels. When used at the recommended treatment ratio, Diesel Treat 2000 Ultra Low Sulfur will not cause a measurable effect on the cetane index, sulfur content or aromatic content of the fuel.

THIS DIESEL FUEL ADDITIVE COMPLIES WITH THE FEDERAL LOW SULFUR CONTENT REQUIREMENTS FOR USE IN DIESEL MOTOR VEHICLES AND NON-ROAD ENGINES.

THIS DIESEL FUEL ADDITIVE IS COMPATIBLE AND APPROVED FOR USE WITH DIESEL FUELS THAT MEET ASTM D975 AND BIODIESEL THAT MEETS ASTM D6751 AND BIODIESEL THAT MEETS EN 14214.

TYPICAL PROPERTIES

Specific Gravity @ 60°F	0.9163-0.9249
Flash Point °F/°C (PMCC)(ASTM D-93)	124°-131°/51°- 55°
Pour Point °F/°C (ASTM D-97)	<-50°/-45.56°
Ash Content (ASTM D-482)	0%
Copper Strip Corrosion Test (ASTM D-130)	1a
Sulfur Content ASTM D-7039	<15 ppm