



Renewable Lubricants, Inc.

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Bio-Bunker™ Fuel Conditioner **Biobased Marine & Industrial Fuel Conditioner**

STABILIZED™
by Renewable Lubricants

Bio-Bunker™ Marine & Industrial Fuel Conditioner is a biobased multifunctional additive for middle distillate fuels that provides marine and industrial boiler operators with cost improvements through improved combustion and reduced maintenance. It assists with emission compliance due to improved combustion and deposit control. In addition, it prevents liner lacquering in highly loaded marine, **off-highway** and power generation diesel engines.

Open Flame Burner Applications:

Bio-Bunker™ Marine & Industrial Fuel Conditioner is particularly useful with boilers and furnaces where a reduction in harmful particulate emissions is needed. This biobased product delivers this through combustion improvement and deposit control capabilities.

Stationary Engine Applications:

Bio-Bunker™ Marine & Industrial Fuel Conditioner has been shown to deliver immediate improved fuel efficiency and emissions. In addition to fuel efficiency and emissions, there is a longer-term benefit from the deposit control when particulate and NOx emissions are improved. It helps control Liner Lacquering (formation of hard resin-like material on cylinder liners) that will lower Lube Oil consumption and consequent Costs/Savings.

Asphaltene Problems:

Asphaltene drop-out, often referred to as black deposits or black paint, is increasingly common as higher yields of distillate products in refineries lead to lower quality residues. It is also very problematic when mixing residual fuels to lower costs. Bio-Bunker™ Marine & Industrial Fuel Conditioner can improve solubility and reduce asphaltene dropout.

Bio-Bunker™ Marine & Industrial Fuel Conditioner provides many benefits for industrial fuel application that translate into significant savings. This savings often exceeds the cost, delivering a “Zero Cost” emissions solution with improved asset management and regulatory compliance.

Advantages / Benefits:

- Combustion improvement
- Cetane improvement
- Improved combustion and deposit control
- Corrosion control
- Oxidation stabilization (STABILIZED)
- **Reduced emissions (less black smoke) and reduced NOx**
- **Improved fuel efficiency**
- Less maintenance & disruption
- Controls Liner Lacquering and greatly lowers Lube Oil consumption

Directions HIGHLY CONCENTRATED:

Best Performance and for fuel system Clean-up – 1 gallon per 500 gallons of fuel

Maintenance Performance for fuel system Keep Clean – 1 gallon per 2000 gallons of fuel

For proper mixing: Add Bio-Bunker™ to fuel before fuel reaches its cloud point and store Bio-Bunker™ Marine & Industrial Fuel Conditioner above 0° C before use.

For heavier residual oils: Warming the fuel and/or Bio-Bunker™ and using mechanical and/or in-line pump mixing, may be required.

Caution: Do not exceed flash points of fuels or oils when heating.

Maximum Mixing temperature of Bio-Bunker™ should not exceed 60°C

Typical Properties:

| | | |
|--------------------|------------|---------------|
| Viscosity @ 40 °C. | ASTM D-445 | 4 cSt |
| Flash Point, PMCC | ASTM D-93 | 180 °F (82°C) |

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|-----------------------|-------------------------------------|----------------------|--------------|--------------|--------------|
| Availability | F.O.B. :Hartville, Ohio, USA | 5 Gallon Pail | Drum | Totes | Bulk |
| Product Item # | | 80514 | 80516 | 80517 | 80519 |