



BELLICIDE

**BIOCIDE AND PRESERVATIVE
FOR DIESEL, BIODIESEL,
CRUDE OIL, FUEL OIL AND
OTHER FINISHED FUELS**

**KILLS MICROBES
COMPLETELY IN AS LITTLE
AS TWO HOURS**

**EFFECTIVE AT KILLING
MICROBES IN FUEL FOR
UP TO 4 WEEKS OR MORE**

- **Broad spectrum biocide**
- **Solvent based**
- **Water dispersible**
- **ULSD approved**

BELLICIDE is a solvent-based preservative used to eliminate and/or prevent the growth of bacteria and fungi in finished fuels (diesel, biodiesel, gasoline, bunker C, etc.)

BELLICIDE is also used to prevent the biodegradation of crude, refined, and feedstock oils and fats (e.g. poultry, soybean, aromatic, paraffinic, naphthenic) during storage.



BELL
PERFORMANCE

We Made It First. We Make It Best.

PRODUCT BENEFITS

- Broad spectrum: kills bacteria, fungi, and algae
- Active in both phases of the system: partitions into both fuel and water
- Fast acting: 100% bacterial kill in just two hours
- Long lasting: Continues killing fuel microbes for up to four weeks or more

BELLICIDE is solvent-based and fully combustible, and will not form combustion residues or hazardous by-products when used.

BELLICIDE is non-corrosive, non-emulsifying, and has long term fuel stability.

RECOMMENDED TREAT RATES

BELLICIDE should be added to the fuel at a rate of 1.25 fluid ounces per 100 gallons fuel (100ppm); 0.50 fluid ounces per 40 gallons of fuel.

Contaminated systems should be treated with 2.5 fluid ounces per 100 gallons fuel (200 ppm); 0.50 fluid ounces per 20 gallons of fuel.

At the maintenance dose of 1.25 ounces per 100 gallons, BELLICIDE imparts a minimum amount of sulfur to the fuel.

SIZE AVAILABILITY

BELLICIDE is packaged in 16-oz bottles as well as 1-gallon jugs and 55-gallon non-returnable drums. All product sizes are shipped by LTL freight carrier. Due to shipping regulations, **BELLICIDE** is only sold by the full case quantity for 16-oz and 1-gallon bottles.

HANDLING AND STORAGE

Refer to Material Safety Data Sheet for suitable materials of construction for handling and storing this product. Improper handling of this product can be injurious to workers.

Observe all safety precautions shown on the label and in the Material Safety Data Sheet.

BELLICIDE is not approved for use in aviation fuels.

COMPARATIVE TESTING

BELLICIDE was tested in the laboratory to compare its effectiveness versus two other leading fuel oil biocides.

The microorganisms used in the study were the bacterium *Pseudomonas aeruginosa*, and the fungus *Cladosporium resinae*, both of which are widely found in fuel.

The results of the study show **BELLICIDE** providing excellent results at the minimum recommended dose after both one and four weeks. These results showed to be equal to or greater than the results obtained by the other two microbicides.

Active ingredients:

2-(Thiocyanomethylthio)benzothiazole..... 2.5%
 Methylene bis(thiocyanate) 2.5%
 Inert ingredients 95.0%

Figure 1. 100 ppm versus *P. aeruginosa*

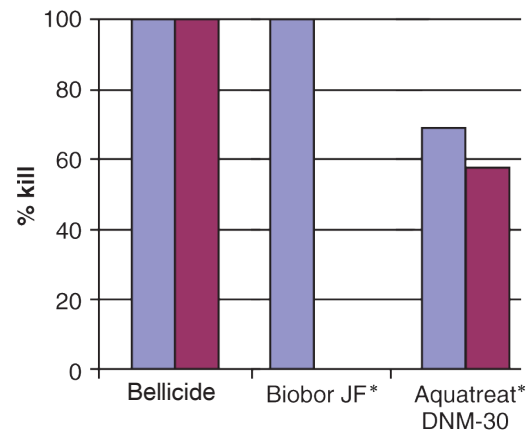
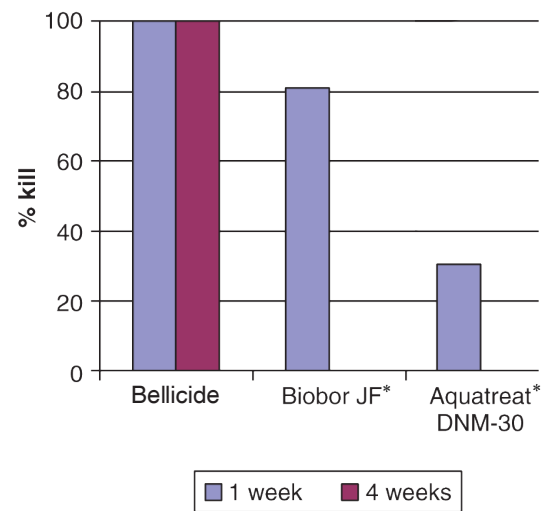


Figure 2. 100 ppm versus *C. resinae*



*Biobor is a registered trademark of Hammonds Fuel Additives, Inc. Aquatreat is a registered trademark of Akzo Nobel Chemicals Ltd.

Physical Properties

Weight per U.S. gallon 8.6 lb
 Density at 25°C (77°F) 1.03 g/cm³
 pH (100 ppm in water) 6–7
 Flash point 70°C (158°F)

Seller warrants that this product conforms to its chemical description and is reasonably fit for the purpose referred to in the directions for use when used in accordance with the directions under normal conditions. Buyer assumes risk of any use contrary to such directions. Seller makes no other warranty or representation of any kind, express or implied, concerning the product, including NO IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS OF THE GOODS FOR ANY OTHER PARTICULAR PURPOSE. No such warranties shall be implied by law and no agent of seller is authorized to alter this warranty in any way except in writing with a specific reference to this warranty. The exclusive remedy against seller shall be a claim for damages not to exceed the purchase price of the product, without regard to whether such a claim is based upon breach of warranty or tort. Any controversy or claim arising out of or relating to this contract, or breach thereof, shall be settled by arbitration in accordance with the commercial arbitration rules of the American Arbitration Association, and judgement upon the award rendered by the Arbitrator(s) may be entered in any court having jurisdiction therefore.