



Busan® DFP

Finished Fuel and Crude Oil Preservative

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

Busan DFP is a solvent-based preservative used to eliminate and/or prevent the growth of bacteria and fungi in finished fuels (e.g. petrodiesel, biodiesel, gasoline, bunker C). Busan DFP is also used to prevent the biodegradation of crude, refined, and feedstock oils and fats (e.g. poultry, soybean, aromatic, paraffinic, naphthenic) during storage.

A proprietary and synergistic blend, Busan DFP is:

- 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

Being solvent based, Busan DFP is fully combustible, and will not form combustion residues or hazardous byproducts when used. Busan DFP is non-corrosive, non-emulsifying, and has long term fuel stability.

Busan DFP should be added to the fuel at a rate of 1.25 fluid ounces per 100 gallons fuel (100 ppm). Contaminated systems should be treated with 2.5 fluid ounces per 100 gallons fuel (200 ppm). At the maintenance dose of 1.25 ounces per 100 gallons, Busan DFP imparts a minimum amount of sulfur and is approved for use in ultra low sulfur diesel applications.

Packaging and Handling

Busan DFP is a liquid packaged in nonreturnable drums and in bulk. **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. Busan DFP is not approved for use in aviation fuels.**

Typical product characteristics

Active ingredients:	
Methylene bis(thiocyanate)	2.5%
2-(Thiocyanomethylthio)benzothiazole.....	2.5%
Inert ingredients	95.0%
Density at 25°C (77°F)	1.03 g/cm ³
Weight per U.S. gallon	8.6 lb
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 the 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 thereof. www.buckman.com knetix@buckman.com © 2008 Buckman Laboratories, Inc. All rights reserved. Product data E472W (03/08)

Comparative Testing

Busan® DFP was tested in the laboratory to compare its effectiveness versus three other leading fuel oil microbicides. 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 Busan DFP providing excellent results at the minimum recommended dose after one and four weeks (Figures 1 and 2). Kathon® FP 1.5 provided similar results. Biobor® JF and Aquatreat® DNM-30 did not perform well, especially after 4 weeks.

Figure 1. 100 ppm versus *P. aeruginosa*

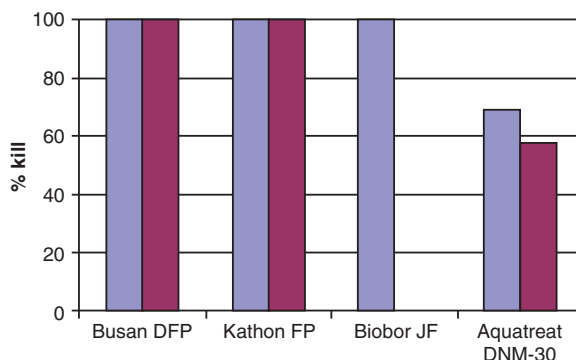


Figure 2. 100 ppm versus *C. resinae*

