



DESCRIPTION

Diesel Fuel Biocide for Bulk Tank Storage Liquid Intelligents 201

Microbes in the form of bacteria and fungus are present in all diesel fuels. Long periods of fuel storage can create ideal opportunities for microbes to grow in fuel tanks. The first indication of microbial contamination is mucous-like accumulations on fuel-filters and increased requirements for fuel-filter replacement. Microbes can only be removed from the fuel system by use of a diesel fuel biocide.

- Liquid Intelligents 201Dual-Phase biocide is effective in both diesel fuel and water as recommended by major diesel engine manufacturers
- Effective as a "quick-kill" biocide and for long-term diesel fuel maintenance
- Kills microbes, bacteria and fungi, that grow in dispersed and free water associated with diesel fuels
- Prevents fuel filter plugging – helps prevent fuel system failures
- Protects fuel system components against organic acids created by microbial growth – prevents fuel tank corrosion
- Improves fuel performance
- Reduces engine maintenance costs

Liquid Intelligents 201Dual-Phase Biocide is one of the most advanced Biocide on the market today. It works not only in water but in diesel fuel. It is formulated for a Quick-Kill of bacteria and fungi growing in free water associated with diesel fuels.

To remove sludge and water from the fuel system. Use the following procedure to achieve a complete microbial clean-up:

Pump or drain fuel contaminants (microbes, water and sludge) from the bottom of the fuel tank until diesel fuel appears. Dispose of fuel system waste in an environmentally responsible manner.

When calculating the amount of additives required for your specific application, always use the total fuel capacity of the tank (if the total capacity of the tank is 2,000 litres, but the tank only contains 1000 litres of diesel fuel, you would use enough additive to treat 2,000 litres of diesel fuel).

Add 2 litre of biocide per 2000 litres of diesel for fungi or bacteria contaminated fuel (KILL DOSE)

Add diesel fuel until fuel tank is filled to maximum capacity. The addition of diesel will mix the additives with the fuel.

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Biocidal Properties

Liquid Intelligents 201 has a broad activity spectrum against the bacteria and moulds that may cause infection and deterioration of diesel fuel products, including the following organisms:

Bacteria	Fungi
Achromobacter sp.	Aspergillus sp.
Aeromonas sp.	Cephalosporium sp.
Alcaligenes sp.	Cladosporium sp.
Bacillus sp.	Fusarium sp.
Escherichia coli	Paecilomyces varioti
Flavobacterium sp.	Penicillium funiculosum
Klebsiella sp.	
Proteus sp.	
Pseudomonas sp.	
Streptomyces sp.	

To keep storage tanks free of microbial growth, treat with Liquid Intelligents 201 biocide at the recommended maintenance treatment (see chart below) ratio every three months.

Liquid Intelligents 201	<u>SHOCK TREATMENT</u>	<u>MAINTENANCE TREATMENT</u>
500mls	500litres	1000litres
1litre	1000litres	2000 litres

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Questions asked about Liquid Intelligents 201Dual-Phase Biocide.

Question: Why is a dual phase important in a microbe or fungus clean up?

Answer: Some biocides are diesel fuel soluble but do not kill in diesel fuel. These types of biocides only are effective in the water layer in the tank. To get a complete kill you need to be able to kill growth on the top and sides of the tank as well. If the fuel tank is filled with fuel and **Liquid Intelligents 201Dual-Phase Biocide** is present in the fuel as recommended you will get a complete kill-off.

Question: Is there any other problems associated with microbial and fungal infestation beside clogged fuel filters?

Answer: Yes. Microbial growth produces organic acids, which will corrode fuel tanks ultimately making them fail.

Question: Should Biocides be used regularly in my fuel tanks or only when growth is found?

Answer: **Liquid Intelligents 201Dual-Phase Biocide** should be used in a maintenance treatment schedule to prevent infestation. This will reduce long term maintenance cost associated with microbial and fungal growth such as corrosion and fuel filter plugging.

Question: How do you kill serious infestations of microbial and fungal infestation?

Answer: Many times the only way to kill infestation and growth is to use **Liquid Intelligents 201Dual-Phase Biocide** in shock treatment amounts. Normally that is three (3) times the maintenance levels. It is just like a swimming pool. If growth is on the sides of the pool the only way to clean and kill is to shock the pool with high amounts of chlorine. It is the same process with a fuel tank only with different chemicals.

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