

**Specialists in  
combating bacteria  
in diesel/water and oil products**



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## The Diesel-bacteria combater

# Bio-Protect 2

### Historic

Maritim Consultants AS has developed and is manufacturing the **Bio-Protect 2**, a product that is very efficient in preventing and combating **Diesel-bacteria**.

This well-known product has been used by numerous of major companies since 1985.

**Bio Protect 2** is registered and approved in CHEMS database for Offshore Chemicals.

### Product description

**Bio-Protect 2** is a bacteria-, virus-, fungi- and algae combating agent that degrades the overall micro-flora in diesel and in diesel-water mixtures.

**Bio-Protect 2** dissolves both in the diesel and the water phase and therefore reaches all **Diesel-bacteria**, regardless of where they appear in the system. It is burned off together with the diesel, and does not harm any parts.

### Instructions

**Bio-Protect 2** can be added directly into the diesel tank via the fuel charge line, *the sounding pipe*, *manholes*, or it can be pumped into the tank with a transfer pump.

If it is added directly to the fuel tanks, **Bio-Protect 2** should be added just before refuelling.

Make sure that **Bio-Protect 2** is mixed thoroughly with the diesel in the tanks and the pipe system.

**Bio-Protect 2** requires approximately 24 hours for complete extermination of **Diesel-bacteria** in the entire installation.

### Dosage

Regular dosage: 1 : 2000 for **Diesel-bacteria** combating.

1 : 5000 for **Diesel-bacteria** preventing.

The amount to be added may in some cases differ from the regular dosage.

Please read the additional information on the reverse side carefully before dosing.

Overall solutions for combating bacteria  
We supply equipment for bacteria-tests  
We carry out laboratory analyses

## Diesel problems - bacterial growth

*Like other organic substances, micro-organism, such as bacteria, virus, fungi and algae, degrades oil products. Micro-organism in connection with diesel, are commonly known as **Diesel-bacteria**.*

*Through their metabolism, **Diesel-bacteria** growing in diesel oil transform parts of the diesel oil into components that are harmful for combustion engines.*

*Greyish, slimy compounds are formed in the diesel oil, and these are gradually forming a slimy layer of mud covering tanks and piping, clogging pipes and filters.*

*This results in reduced or total failure in the fuel supply, which will be a serious security risk. A number of breakdown and problems with diesel-driven vehicles are due to such problems.*

*This layer of mud can contain millions of micro-organism, also known as **Diesel-bacteria**, per gram of diesel. Micro-organism attack and oxidise surfaces in tanks and fuel systems, and can cause great damage, especially to nozzles and pumps.*

## Solving the problem

These problems can be prevented or combated by adding **Bio-Protect 2** to the tanks.

**Bio-Protect 2** combats the **Diesel-bacteria** and prevents the growth of new ones.

Preventive use of **Bio-Protect 2** protects you against **Diesel-bacteria** even if you bunkering infected diesel.

## Before dosing

### Preventing **Diesel-bacteria**:

If you are confident that you are not infected, use a preventive dosage.

If you are at all in doubt, use the combative dosage the first time, and continue with using preventive dosage.

### Combating **Diesel-bacteria**:

1. If you can visually identify compounds of **Diesel-bacteria** in filters and/or water separators, this indicates a high degree of infection in the tanks, and cleaning is necessary (see point 4).
2. Check the diesel yourself by using our **Dipstick Combi**, or send a sample to a laboratory.
3. In the event of small amounts of **Diesel-bacteria** being present, add a combative dose of **Bio-Protect 2**.
4. Large amounts of **Diesel-bacteria** require cleaning of tanks and pipes before adding **Bio-Protect 2**

## Area of application

All diesel-driven Engines, Kerosene and Fuel oil

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