

# grotamar® 82

Stops bacteria and fungi in diesel. Optimised protection specifically for diesel fuels, including biodiesel.





# Biodiesel – good for the environment, good for diesel bugs.

Whether "diesel bug", "fungus", "bacteria" or "MBC" – infestation by microorganisms in diesel fuel has many names.

Whatever you call the phenomenon, it has a common cause. Free water in the diesel will enable the growth of bacteria, yeasts and moulds. Small amounts of water which form by condensation are sufficient to stimulate microbial growth in a fuel tank.

Today, "fossil" diesels are blended with environmentally friendly biodiesel. Biodiesel is good for the environment but also good for microbes. Biodiesels are a good source of nutrition for microbes and they promote the contamination of the fuel with water. Biodiesel is also less stable than "fossil" diesel and degrades with ageing leading to darkening and formation of solid deposits.

Microbes grow faster than ever, forming "biomass" and causing corrosion. The "biomass" clogs filters and leads to engine failure. This places the operating reli-ability and safety of the whole system at risk!

# grotamar® 82 at a glance

- specifically developed for modern diesel fuels including low sulphur diesels and fuels containing biodiesel
- new protective formula to prevent premature oil degradation caused by ageing
- fast and highly effective against bacteria, yeasts and moulds
- excellent long-term protection for fuel tank, pipes and engine
- excellent solubility and dispersion in all types of diesel fuels, heating oils (including BO-B20) and biodiesel
- no corrosive combustion products
- effectively protects steel, aluminium, copper and other non-ferrous metals against corrosion

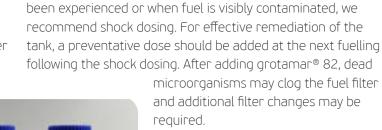
### Application:

Drain any water or sludge from the tank as thoroughly as possible and then add grotamar® 82 directly. It is not necessary to dissolve grotamar® 82 before adding it and no further mixing is required.

grotamar® 82 disperses quickly and evenly in the fuel. The dosage must be based on the total volume of fuel to be treated.

If **operational problems**, such as filter blockage, have

In the picture, the bottle on the left shows a fuel protected with grotamar® 82 and the bottle on the right shows contaminated fuel of the same type.



If biomass has accumulated on the tank floor or is adhered to the tank walls, the fuel system (tank, pipes, filters) should be cleaned before treatment with grotamar® 82. This will minimise the chance of recontamination.

Underdosing must be avoided!



# grotamar® 82: Dosage & References











## Dosage table

#### Preventive dosage

Add 1/4 bottle (250 ml) per 1000 L (1:4000) fuel every time the tank is refilled

Use every time you fill the tank!

#### Shock dosing

Follow application instructions: 1 bottle of grotamar® 82 (1 l) per 1000 L fuel

Underdosing is to be avoided!

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### References and approvals

#### Vehicle and engine manufacturer

MAN Nutzfahrzeuge AG – grotamar® 82 has been tested and approved.

MTU Friedrichshafen GmbH – grotamar® 82 is approved for use in all MTU and DDC engines of the 2000/4000 series, Deutz AG – grotamar® 82 is recommended for use against biological contamination

in fuels, technical newsletter

0199-99-1218/ODE Mercedes-Benz – grotamar® 82 recommendation: »MB approval 138.1«

#### Institute

Ol-Warme-Institut Aachen - grotamar® 82 has successfully passed the

hardware-in-the-loop test in 2000 hours of test time

SGS Fresenius - grotamar® 82 fulfils the criteria check list for heating oil additives (DGMK 646).

#### Armed Forces/NATO

- Germany stock number 1-litre bottle
- Stock number 10-litre canister 6840-12-388-3543
- Fuel item number of the German Armed Forces: XW013

Check out our new grotamar® Test Kit <u>here</u>!



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