

biototal marine

shipboard solutions

TECHNICAL DATA SHEET

BIOTAL GT 3000

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Biototal GT 3000 is a liquid biological product containing application-specific bacteria strains able to degrade fats, oils and grease, and other food waste in galley drains, scuppers and grease traps, reducing build-up and preventing odours.

Product Description

The bacteria strains in Biototal GT 3000 are selected specifically for their ability to produce extra-cellular enzymes to rapidly degrade a wide variety of food wastes, including fats, oil and grease, protein, starch and fibre. The bacteria in the product are strains proprietary to Biototal Marine and have been extensively screened by our own research and development team to prove they are able to degrade a wide range of fats, oils and grease materials all the way to carbon dioxide and water, and the capabilities of the strains have also been tested under a broad range of environmental conditions. A further feature of the GT 3000 strains is the ability to form biofilms, microbial communities consisting of billions of bacteria within the pipe work or grease trap, which are highly resistant to occasional shocks of low or high pH, temperature or chemicals.

Also present in the formulation is an eco-benign[®] surfactant combination that softens solid fat build-ups making them readily available to the bacteria, encouraging biodegradation without emulsifying the fat.

These many features of Biototal GT 3000 means that it is the most effective biological product specifically designed for the treatment of fats, oils and grease build-up in marine galleys.

Application Area

Grey water waste includes that which comes from the galley, baths, sinks, showers and laundries. Galley waste in particular can contain high levels of food derived fats, oils and grease that can build up within the scuppers and other drains within the galley and pipework from the galley to sewage plants or holding tanks. On some vessels where extensive food preparation occurs, grease traps or interceptors may have been fitted within the galley to try to capture and control fatty materials.

In both drains/scuppers and in grease traps, fat deposits can lead to slow water flows and even localised flooding, and these build-ups often result in odours due to the slow biological breakdown of fats and other food residues under anaerobic conditions. As anaerobic bacteria break down fat and other waste materials, volatile fatty acids are formed, leading to persistent and characteristic odour problems.

Regulatory Environment

Many people believe that grey water, i.e. that coming from the galley, baths, sinks, showers and laundries is unregulated under the International Convention for the Prevention of Pollution from Ships (MARPOL). However, the issue of grey water is being considered actively by the Marine Environment Protection Committee (MEPC) and at the 63rd Session in 2012, for example, several preliminary conclusions were made suggesting that Annex IV should be interpreted to cover waste waters of all types, including grey water. Thus a future proof and 100% compliant interpretation of Annex IV is that grey water should be treated like sewage as 'waste water' and so if not treated or comminuted and disinfected it has to be discharged at a distance of more than 12 nautical miles from the nearest land.

Depending on the type of vessel and the routes sailed, a number of on-board management steps relating to grey water may be required.

Packaging

Biototal GT 3000 is supplied in 10 litre drums as standard. Other packaging options may be available on request.

Biototal GT 3000: Features and Benefits

Features

- Application-specific bacteria strains with high enzyme production for rapid breakdown of food wastes
- Strains are proven to degrade wide range of fats, oils and grease all the way to carbon dioxide and water
- Includes eco-benign® chemistry to enhance the action of the bacteria
- Very high bacteria specification for maximum effectiveness in this tough environment
- Product bacteria form a biofilm on the inside of the pipes which offers protection against extremes of temperature and pH, therefore the system is able to function in a wide range of pH and temperature environments
- Designed for automatic dosing so problem is solved with minimum engineer input
- Long product shelf-life.

Benefits

- Reduces the requirement and frequency of mechanical treatment to unblock drains or empty grease traps due to grease build-up
- Provides rapid control of odours from the drains within the galley
- Non-caustic and non-corrosive
- If grey water is being treated in a sewage treatment plant, grease is partially degraded by the time it reaches the plant, reducing the potential for system overload.

Application/directions for use

Try to locate the main source of the fats: this may be a manual pot washing sink or rinsing station within the galley.

It is recommended to dose 150ml per day of the Biototal GT3000 product directly upstream of this point, using a timer and peristaltic pump. A 10 litre container will require changing every 60 days.

Ideally the dosing should be timed to occur during a period when the galley is largely inactive.

Do not dose the product too close to a dishwasher outlet as the high temperature and high pH dishwasher discharge can have a negative effect on the biological action of the product.

Manual dosing of the product is also possible, although it must be done regularly for optimum results. Consult your Biototal Marine representative for more information on this.