

BioSmart™ Bacterial Products

Aviation Toilet Treatment BioFresh

BioFresh is a concentrated blend of naturally occurring microbes for treating aviation toilet waste tanks. Environmentally friendly bacteria break down biological matter and solids for easy pumping.

The Problem

Throughout the world, air travel has continued to grow unabated and with it, a string of problems have been created. The provision of toilets in aircraft comes at a high cost to the airline industry. Together with the use of toxic chemicals, such as formaldehyde, disposal continues to escalate the cost, due to ever heightened environmental safeguards.

In fact, the irony of using formaldehyde is that it is merely a preservative and does nothing to help break down the organic matter or reduce sludge build-up.

The Product and Solution

BioFresh is a concentrated multi-strained blend of naturally occurring microbes, carefully selected to provide a broad range of effective operating conditions. The product contains bacterial strains to digest fats, oils and greases (FOGs) and other organic waste, typically associated with grease traps and waste water systems. The organic debris is utilised by the product bacteria, so that the waste is effectively broken down at the source and not just transferred downstream.

BioSmart's enzymes, such as amylase, protease, lipase and cellulose biodegrade most of the solids found in the tanks and liquefy the remaining solids for easy pumping.



Key product features

- Stable blend of safe Bacillus spores
- Production of high levels of multiple extra-cellular enzymes, providing a wide range of degradation capabilities including grease, lipids, short and long chain fatty acids, cellulose, protein and starch
- Low pH effectiveness (down to pH 4.5)
- Low temperature efficacy (down to 10°C)
- Good bacterial performance in low nutrient conditions
- Ability to work under aerobic and anaerobic conditions
- Controls unpleasant odours
- Reduces frequent pumping out
- Removes highly toxic chemicals
- Lowers cost of airborne toilets
- Safe to humans and animals

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Benefits of regular application

FOG's (fats, oils and greases) are composed of triglycerides, which are broken down by bacteria in two stages. Firstly, the molecule is broken down into glycerol and free fatty acids by the enzyme lipase. Secondly, the free fatty acids are broken down into smaller molecules using specialist enzyme pathways. Therefore, the FOG levels are dramatically reduced due to the effective breakdown of triglycerides and resulting long- and short-chain fatty acids by carefully selected bacteria.

Moreover, the biological breakdown of the FOG's is irreversible and thus, the trapped grease levels are reduced in-situ and not transferred downstream, reducing the incidence of maintenance problems and the need for grease trap pumping. Overall, an improved free-flow in drain lines.

The production of odours is reduced dramatically, due to the product bacteria inhibiting the production of hydrogen sulphide and from the effective break down of volatile fatty acids that may be produced in septic or anaerobic environments.

The secretion of high levels of amylase, cellulase, lipase and protease enzymes by the product bacteria, results in the effective break down of all the organic components of waste associated with the drain environment.

Finally, because the bacterial process enables a significant reduction in BOD levels, the overall sewage costs are correspondingly reduced.



Usage Instructions

Apply an initial dose of 100ml to 200ml into the empty waste tank. Repeat if the tank is not emptied for more than 2 or 3 days and repeat again when the waste tank is emptied. To portray the right image within the toilets you should use our BioJet product, which provides a blue coloured dye and a sweet fragrance.

Health & Safety

BioFresh should be handled under good house keeping practices and you should always wash hands after use. The product contains naturally occurring non-pathogen microbes. However, please keep the product away from drinking water and foodstuffs. BioFresh is non-flammable, biodegradable, non-toxic and when used as directed, is completely safe. For best results, store product in a cool, dry place.