

BFL 4250HS

The effluent from many food-processing industries contains large quantities of organic materials many of which are easily biodegradable. Others are a little more complex and require a longer time and sometimes a more specialised biomass to promote and accelerate their removal from the wastewater. One such material is starch. Industries associated with its presence include: -

- ◆ Potato
- ◆ Bakery
- ◆ Milling (flour)
- ◆ Pasta
- ◆ Pizza
- ◆ Other vegetable processing

While the degradation of residual sugars and protein are relatively easy, the degradation of starches can be more difficult, especially as starch can react with other components and form layers which coat the walls of pipes, sewers and tanks as well as coating the surface of the filtration material in high rate towers and trickling filter systems. Presence of starch in a wastewater can also promote filamentous / bulking sludge, turbid final effluent, poor BOD/COD degradation. Situations in which the use of BFL 4250HS is beneficial include: -

- ◆ Plant start up
- ◆ Poor settlement
- ◆ Turbid final effluent
- ◆ Overloaded plants
- ◆ Re-seeding
- ◆ Poor final effluent quality
- ◆ Shock recovery
- ◆ Bulking sludge

BioFuture harnesses the power of environmental biotechnology to solve the problems by degrading the starch as well as other organic materials present such as

proteins, sugars, celluloses and hemicelluloses. BFL 4250HS uses only harmless, natural micro-organisms that control the problem by degrading the organic matter

to CO₂ and H₂O in a highly effective and environmentally acceptable way.

What is BFL 4250HS?

BFL 4250HS consists of a carefully selected blend of natural micro-organisms that have the ability to efficiently degrade starch, proteins, sugars, cellulose, hemicellulose and other organic materials in the effluents from these starch processing industries. The wide range of strains have been specially chosen for their ability to produce the broad range of enzymes required to completely degrade the organic matter. These strains grow at a fast rate so that they can quickly establish dominance in the biomass, which is the heart of the wastewater treatment system. The product contains strains which have the ability to produce good floc structure which will settle well and produce a clear final effluent. The strains in the product work in harmony with the existing biomass and increase its overall efficiency so that plant performance is restored as quickly as possible. The product blend contains facultative strains, which can work effectively in lagoon systems where oxygen is limited.

The types of systems in which BFL 4250HS can be used include:-

- Activated sludge
- Biotowers/High rate towers
- Aerated lagoons
- Oxidation ditches
- Trickling filters
- MBBR
- MBR

The microbial strains are produced as single pure cultures, harvested, stabilised on a cereal base and blended together to produce the final product. Extensive checks are conducted throughout the process to ensure purity and quality of the product.

Directions for use

The product as supplied is on a cereal base so it is important that the bacteria are rehydrated before use. This is achieved by adding the required quantity of product to lukewarm (~30°C) water in a suitable container. Apply 1 part product to 10 parts water, stir well and allow to stand for 1 hour before application. Apply the rehydrated product immediately prior to the aerated section of the treatment plant e.g. into a drain, pump sump or return sludge line.

Since each application is different and has different characteristics it is important to assess the site before deciding on a dosing programme. The BioFuture Technical Department provides assistance in assessing the site and devising a treatment programme.

Product safety

The micro-organisms in BFL 4250HS have all been isolated from natural environments. They have not been genetically modified in any way. These microbial strains have been classified as being harmless to humans, animals and plants. The product is subjected to independent testing to ensure that it is free of *Salmonella* and other contaminants.

Product Characteristics: Dry preparation containing harmless natural bacteria stabilised on a cereal base.

Bacterial count: >8.0 x 10⁸ c.f.u./gram.

Bacterial type: Natural microbes which have not been genetically modified and which belong to Group 1 as defined by WHO and EU.

Salmonella/Shigella: Not detected.

Appearance: Free flowing tan powder.

Storage temperature: 0—45°C.

Shelf life: 2 years.

Performance characteristics: Strong enzyme production for the aerobic degradation of starch in aerobic wastewater treatment systems. Microbes work under aerobic conditions and as facultative anaerobes.

pH range: 5.0—9.0.

Manufactured: Ireland, EU

Available packaging: 5, 10 and 20kg buckets

For further information on dosing programmes and product application please contact :-

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