

BFL 4450LL

The waste in domestic landfill sites is largely composed of degradable organic material. Of the total some 40% is paper while another 30% is composed of vegetable waste. The environment within the landfill is anaerobic as any air trapped in the waste is quickly used up by microbial activity. The anaerobic activity within the landfill results in the production of methane, carbon dioxide, ammonia and water.

Landfill leachate is composed of the water produced by anaerobic digestion, water released as vegetable matter is degraded,

and rainwater falling on the site. In engineered landfill sites this leachate is collected through an extensive drainage system. As the leachate



percolates through the landfill it dissolves soluble organic material so that it is highly polluting when it emerges from the landfill. Therefore the leachate must be treated before it can be discharged.

The treatment of landfill leachate is normally conducted in aerated lagoons or tanks. Due to the large volumes and high strength it is necessary to have a very efficient degradation process to produce a final effluent which meets discharge permits.

Typical situations in which the use of BFL 4450LL are beneficial include:-

- ◆ System start up
- ◆ Overloaded treatment systems
- ◆ Poor final effluent quality
- ◆ Re-seeding
- ◆ Odours

BioFuture harnesses the power of environmental biotechnology to solve the problems by degrading the organic materials in an exceptionally efficient manner.

BFL 4450LL uses only harmless, natural micro-organisms that deal with the problem by degrading organic matter to CO₂ and H₂O in a highly effective and environmentally acceptable way.

What is BFL 4450LL?

BFL 4450LL consists of a carefully selected blend of natural micro-organisms that have the ability to efficiently degrade partially degraded and soluble organic materials in landfill leachate. 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 biological population. The product contains strains that 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 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.

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

Product safety

The micro-organisms in BFL 4450LL 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 leachate 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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