BioFuture Ltd.

Industrial

BFL 5100HP

The effluent from the meat processing industry contains high levels of proteins in the form of blood and muscle. There are also considerable quantities of animal fats and in slaughtering facilities, of manure. Due to the nature of the industry there are seasonal variations in the flow and organic loading based on the kill. Effluents containing blood are highly coloured and due to their very high organic strength they can cause oxygen depletion in an activated sludge treatment plant. The degradation of proteins gives rise to the production of considerable quantities of ammonia. It is therefore important that the proteins are broken down efficiently so that nitrification can be established in the wastewater treatment plant.

Situations in which the use of BFL 5100HP are beneficial include:-

Plant start up	**Poor final effluent quality**
Poor settlement	**Shock recovery**
Difficult dewatering	**Bulking sludge**
Overloaded plants	**Poor oxygen transfer**

BioFuture harnesses the power of environmental biotechnology to solve the problems by degrading the proteins, fats and faeces in an exceptionally efficient manner. BFL 5100HP uses only harmless, natural micro-organisms that deal with the problem by degrading the organic matter to CO_2 and H_2O in a highly effective and environmentally acceptable way.

What is BFL 5100HP?

BFL 5100HP consists of a carefully selected blend of natural micro-organisms that have the ability to efficiently degrade proteins and, in particular, blood and other organic materials in the effluents arising from the meat processing and slaughtering industry. 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 type of wastewater treatment system in which BFL 5100HP can be used include:-

Activated sludge	**Oxidation ditches**
Biotowers	**MBBR/IFAS**
Aerated lagoons	**Membrane BioReactors**
Sequencing batch reactors	

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^{o}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 Technical Department provides assistance in assessing the site and devising a treatment programme.

Product safety

The micro-organisms in BFL 5100HP 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 in accordance with EU and WHO guidelines. The product is subjected to independent testing to ensure that it is free of *Salmonella* and other contaminants.

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

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