

Biofuture BIOFUTURE LTD.

BIOREMEDIATION

BFL 6000HC

In many sites contaminated by hydrocarbons the natural microbial population is unable to degrade the oil compounds. The result is that oil spills in soils remain for years and prevent growth of grass or other plants. The hydrocarbons are also toxic to many soil organisms which are an integral part of the soil ecology such as worms, beetles, etc. The traditional solution has been to excavate the soil and dispose of it. The soil removed is replaced by clean topsoil. Since the excavated soil is contaminated with hydrocarbons it is treated as special waste and can only be accepted by special licensed landfill sites.

BioFuture harnesses the power of environmental biotechnology to solve the problem by treating the contaminated soil at source. This is achieved by use

of a product such as BFL 6000HC. This product contains microbial cultures that have



been specially selected for their ability to efficiently break down the many different compounds contained in oil products. The use of BFL 6000HC together with nutrients will accelerate the degradation of hydrocarbons so that the toxicity of the soil is eliminated. BFL 6000HC uses only harmless, natural micro-organisms that deal with the contamination by degrading the hydrocarbons to CO_2 and H_2O in an environmentally acceptable way.

BFL 6000HC works equally well in dealing with hydrocarbons in groundwater or in water courses.

What is BFL 6000HC?

BFL 6000HC consists of a carefully selected blend of natural micro-organisms that have the ability to degrade all the main classes of compounds in oil fractions. These fractions are aliphatic, aromatic and polar compounds. The product contains a broad range of different microbes that can produce the enzymes required to completely degrade these diverse compounds. In addition to the ability of the microbial strains to produce enzymes it is vital that some strains can produce biosurfactants. This is because oil based compounds do not mix with water and it is important for the strains to produce biosurfactants which emulsify the oil and make it easier to degrade. The microbial strains in the product also have the ability to function under conditions where oxygen is limited so that they can work beneath the surface.

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.

BFL 6000HC can be used to deal with spills from kerosene, petrol, diesel, heating oil, lubricating oils, heavy fuel oils, crude oil, etc.

Directions for use

The product as supplied 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. Ensure thorough coverage of the contaminated area using a watering can or similar. It is important that carefully balanced nutrients in the form of nitrogen (N) and phosphorous (P) are provided also. These nutrients can be provided by the use of BFL 6200NM which also contains micronutrients and organic nutrients.

Since each site is different and has different characteristics it is important to assess the site before deciding on a dosing programme.

Product safety

The micro-organisms in BFL 6000HC 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.



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