

HC BioSpikes

HYDROCARBON REMEDIATION GRANULAR SPIKES

NEW

INFORMATION

HC BioSpikes are the newest bioremedial cleaning products specifically designed to remediate hydrocarbon contamination by applying micro organisms to the settled oil & sludge layer at the bottom of aquatic environments. These "spikes" have the ability to degrade many different types of hydrocarbon contamination caused by oil spills, tanker leaks, well "blow-outs" and everyday contamination of oceans, rivers, lakes, marshes and safe enough for "backwater bird and wildlife environmental sanctuaries". The micro-organisms in **HC BioSpikes** are capable of degrading residual organic material contained in the "sludge layer" that forms when water, sand and other solid materials combine and sink to the bottom of these areas. **HC BioSpikes** will descend to the bottom, remediate and assist to render these aquatic areas hydrocarbon free and safe.

Soil and water contamination poses health risks through both contact and leaching. The traditional clean-up of contaminated soil would require costly removal, time consuming transport, heavy machinery and sometimes containment of high toxic materials and sites. It is imperative that eco-friendly, cost effective and natural means such as **HC BioSpikes** are implemented when soil and water contamination situations arise. When used in accordance with the prescribed directions, **HC BioSpikes** will safely and effectively solve you contamination problems with very little labor and equipment expenses.

USES & APPLICATIONS

HC BioSpikes are very safe to use. Because the "spikes" are granular, we suggest that the use of gloves would be prudent. After use, wash hands with soap & water. Store in a cool dry place. BioSpikes that are broken can be used with full effectiveness. Some of its key benefits are:

- Cost-effective alternative to conventional remediation methods
- Can be applied to areas that other technologies cannot treat
- Restoration of pristine, ecologically sensitive areas
- Helps to prevent further contamination in the future
- Reduction of harmful evaporation and odors from residual hydrocarbons
- Application requires no special training or equipment

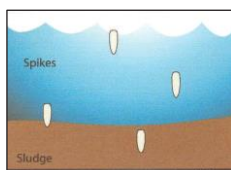
We offer a wide breadth of bioremedial cleaning products that are environmentally sound and dedicated to the cleaning and remediation of potentially harmful contaminants. While each product has specific applications and uses, they all share the unique ability to transform hazardous compounds into safe and disposable carbon dioxide (CO₂) and water. The process of bioremediation is listed as one of the US Environmental Protection Agency's (EPA) innovative technologies and can be accomplished in-place (In Situ) thereby eliminating the hazard and costs of "off-site" contamination. Bioremediation is a cost effective way to eliminate harmful contaminants to our environment.

We have the most extensive line of products available to solve your hydrocarbon contamination problems from the past and to prevent those problems in the future.

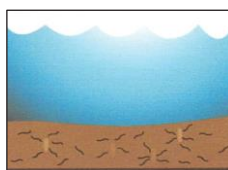
DIRECTIONS & PROPERTIES

HC BioSpikes are very easy to use and distribute. They can be tossed from anywhere to fully treat the area of contamination; Marsh boats, row boats, ships, airplanes, are all great ways to apply this innovative technology to the underwater contamination. **HC BioSpikes** are very safe to use, the "spikes" are granular, we suggest that the use of gloves would be prudent; after use, wash hands with soap & water. Store in a cool dry place. Broken spikes can be used with full effectiveness.

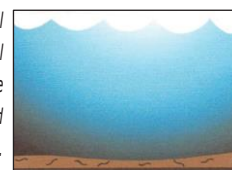
HC BioSpikes are dropped at the water surface and will sink directly into the contaminated sludge layer below.



HC BioSpikes will disintegrate and the bioremediation process will commence as the micro-organisms permeate throughout the sludge layer.



HC BioSpikes will continually degrade residual hydrocarbons and reduce the amount of sludge and eliminate contamination.



APPROXIMATE DOSAGE CHART

Call for additional information.

HC BioSpikes	INITIAL DOSE	MAINTENANCE DOSE	HOT SPOTS
CASES/ACRE	16	8	16
CASES/1000 m ²	4	2	4

PHYSICAL PROPERTIES:

Appearance: Torpedo shaped compressed granular spikes Length: 5.3" (13.5 cm) Width: 1.5" (3.81 cm) Circumference: 4.5" (11 cm) Soluble in Water: Complete
Weight/each: approx. 5.3 oz (150 grams) Optimum Temp. Use: 45° - 100° F (7.2° - 38° C) Bacterial Count: 300 billion/spike (3 X 10¹¹) Usage: Fresh or Salt Water

PRODUCT EFFECTIVENESS: The effectiveness of this product and the "speed" at which it works is determined by certain factors. In general these factors are as follows:

TEMPERATURE: The warmer the temperature, the faster this product will work.

TYPE OF HYDROCARBON: Some hydrocarbons take longer than others. The bioremedial process will begin immediately but may take longer to complete depending on the above factors.

PACKAGING: 125 individual spikes per Case (case weight: 44 lb./20 kg) bulk packaging available, please call for details and options.

A partial listing of additional bioremedial products available through Environmental Solution, Inc.:

- Bioremedial Absorbent • Light & Heavy Duty Multi-Use Cleaner/Degreaser
- Bio Based Solvent Replacements • Soil & Water Remediation • Food Processing Plants
- Bioremedial Parts Washer • Floating Absorbent • Oil & Petroleum Processing, On/Off shore
- Pharmaceutical Grade Absorbent • Biological Wastewater Booster Kit
- Bilge, Engine Room and Galley Degreaser • Floating Absorbent • Site Specific Absorbent

FOR ADDITIONAL INFORMATION OR TO PLACE AN ORDER, PLEASE CONTACT



Total Bio Solution, LLC

BIOREMEDIAL CLEANING PRODUCTS FOR A CLEANER, GREENER WORLD

Total Bio Solution, LLC is a distributor of bioremedial cleaning products that eliminate spills, contamination and environmental hazards utilizing eco-friendly solutions manufactured by EnviroLogic, Inc.

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