



## ***BioSorb 2008*** **PRODUCT BULLETIN**

*BioSorb 2008 is a Proprietary Complex Polymer & Enzyme System Designed For Use With Any Hydrocarbon Based Waste. Its Unique Blend Of Polymers & Enzymes Turn Liquid Hydrocarbons (Gas, Fuel & Oil) Spills Into An Easy To Handle Solid, Rubber-Like, Floating “Mat”*

Appearance.....	White, free flowing powder
Odor.....	Neutral
pH.....	Neutral
Effective pH range.....	5-12
Effective Temperature Range.....	30-150F
Shelf Life.....	5 Years

### **FEATURES**

**BioSorb 2008** encapsulates, retains, binds and immobilizes any hydrocarbon based spills within minutes.

**BioSorb 2008** prevents further migration of the hydrocarbon spill, whether it be on land or fresh/salt water.

**BioSorb 2008** is easy to use, easy to gather & is able to remove hydrocarbon spills without rubber boots, gloves or aprons.

**BioSorb 2008** reduces manpower & equipment requirements by allowing hydrocarbon spills to be handled quickly & efficiently with no wastage.

**BioSorb 2008** forms a floating, non-leachable, solid, rubber-like mat which can then be lifted scraped or swept from any surface (solid or liquid).

**BioSorb 2008** is non-toxic.

**BioSorb 2008** is non-hazardous.

**BioSorb 2008** is non-corrosive.

**BioSorb 2008** encapsulates 5X its weight.

**BioSorb 2008** is formulated with Health, Safety & the Environment in mind.



## ***BioSorb 2008***

### **PRODUCT OVERVIEW**

**BioSorb 2008** is used to immobilize petroleum and related liquid material to a recoverable solid, with minimal overall volumetric increase. Upon use, **BioSorb 2008** forms a gel appearance, and upon saturation, produces a cohesive mat, of rubber-like material. As a result of this micro-encapsulation effect, the product converts the original liquid material into a non-leachable solid. **BioSorb 2008** is insoluble in water and resistant to a number of acid and alkali aqueous solutions. **BioSorb 2008** is non-hazardous, non-toxic, and non-corrosive.

When **BioSorb 2008** is in contact with specific organic materials such as gasoline, diesel fuel, crude oil and the like, it allows the liquid organic material to “sorb” or diffuse into the structure. After the material has reached its capacity for organic uptake, it will cure in a relatively short time. This allows for the transformation of the liquid organic stream into a more easily handled solid form and the formation of a “waste product” is eliminated. Thus, allowing the used material, if acceptable via TCLP and other EPA State testing procedures, to become an intermediate for introduction into another downstream process.

The primary function of **BioSorb 2008** in water spills, is to immobilize the petroleum-based material on fresh or salt water. This immobilization can occur as a result of a “confined” product application, where the material is used via the form of a boom, pillow, pad or other general shape. The material can also easily be applied in its “free-form” directly to the spill, either manually or with mechanically assisted devices. Other current technologies which involve the removal of the actual spilled material are relatively time sensitive. In certain types of crude oil spills, as the volatile fraction dissipates, the spill begins to form an emulsion with water. As the specific gravity increases, the spill sinks into the water below the surface making recovery much more difficult and increasing the risk of further environmental degradation. If this has begun prior to application of **BioSorb 2008** introduction, the material can be introduced below the surface level of the spill and as it rises to the surface, it will pass through the emulsified waste and “float” it to the surface in an encapsulated form.

**BioSorb 2008** is ideal for immobilization of petroleum product spills on hard surfaces such as concrete floors in industrial and commercial settings, highways, parking lots, and the like. An effective method for handling hard surface, land-based spills is to dike the perimeter of the spill to prevent further migration. The opportunity then exists to reclaim spilled material. If desired, full immobilization can be achieved by spreading **BioSorb 2008** over the diked material to form a solid, rubber-like mat. The treated material then can be recovered with a broom, shovel, or other suitable method, and packaged for disposal.

Experimental data indicates that the used **BioSorb 2008** material, typically renders the recovered solvent less toxic, from a TCLP perspective versus the original, spilled, organic material. Experiments indicate that spent **BioSorb 2008** resulting from fuel oil recovery, has a BTU value content in excess of 19,000 BTU’s per pound of spent material. The Ash content of the incinerated material was found to be less than 0.2%. This is an ideal scenario from a resource conservation standpoint.

Typical organic materials, which are amenable to treatment by **BioSorb 2008** include the following:

<b><i>Jet Fuel</i></b>	<b><i>Seal Oil</i></b>	<b><i>Diesel Fuel</i></b>	<b><i>Lacquer Thinner</i></b>
<b><i>Cutting Oils</i></b>	<b><i>Toluene</i></b>	<b><i>Xylene</i></b>	<b><i>Gasoline</i></b>
<b><i>Motor Oil</i></b>	<b><i>Oil Base Paints</i></b>	<b><i>Methyletyl Ketone</i></b>	<b><i>Transmission Oil</i></b>
<b><i>Transmission Fluid</i></b>	<b><i>Solvent Base Paints</i></b>		