



Converde “ContaminantHalt”

Contaminant & Sludge Dispersant
Land, Water and Sewage BioRemediation


Background Information

Bioremediation is a process used to clean up water, land and soils contaminated with petroleum hydrocarbons and other hazardous compounds. In the bioremediation process, indigenous microbes (biomass) and microbial inoculants degrade contaminants and detoxify the soil. The byproducts resulting from this process are carbon dioxide and water. In short, bioremediation takes contaminated water, land and soil and converts the contaminants into non hazardous substances.

Bioremediation is an economical and safe method for cleaning up oil spills and bioremediating water, land and soils contaminated with petroleum hydrocarbons and dangerous organic compounds. The bioremediation process utilizes beneficial microbes, surfactants, micronutrients and biostimulants to decompose contaminate transforming them into harmless byproducts, i.e. water and carbon dioxide.

Bioaugmentation involves the application of beneficial microbes that have an affinity towards a specific contaminant. Typically, these microbes are suspended by a stabilizing agent and lie dormant in a spore until activated in solution and applied together with micronutrients and bio stimulants.

Bioremediation Benefits:

-  Thorough degradation in a relatively narrow time window.
-  Simultaneous multiple activity
-  Toxin resistant
-  Reduced risk / higher degree of safety
-  Reduced labor and equipment cost




General Basics of "ContaminantHalt"

Converde "ContaminantHalt" is formulated to accelerate the biodegradation of hydrocarbons in aqueous environments.

Converde "ContaminantHalt" constituents include:

- 1) Biosurfactants which reduce hydrocarbon based contaminants into smaller molecules; and
- 2) Aerobic and facultative microbes which have a high resistance to the effects of organic inhibitors found in waste water with high salt content.

Converde "ContaminantHalt" Benefits:

-  Enhances BOD and COD removal
-  Improves sludge settlement
-  Removes oil deposits
-  Eliminates unpleasant odors associated with oily waste

'Converde "ContaminantHalt" assists in oil cleanup like no other product on Earth can.'

Converde "ContaminantHalt" aids in transforming contaminated water and soil into a productive, environmentally sound, sustainable enterprise. It is a supercharged organic that does not harm the water, land, soil or atmosphere and brings all back to life – and at a lower cost.

Specifics of "ContaminantHalt"

- "ContaminantHalt" is a super concentrated, high efficiency, low toxicity biosurfactant for use in breaking down and dispersing fresh and weathered hydrocarbons.
- "ContaminantHalt" Contains a class of natural compounds and plant extracts which aid in bringing chemicals, which are not water soluble, into solution. This product promotes rapid bacteria growth for bioremediation of hydrocarbons.
- Is effective in accelerating the process of natural dispersion when mechanical recovery is not feasible and supporting indigenous bacteria and microbial inoculants in exsitu and insitu environments. Converde "ContaminantHalt" has high solubilizing properties and does not absorb to soil.
- The unique Converde process for production of "ContaminantHalt" extracts polysaccharides, enzymes, vitamins, hormones, polyuronic acids and humic acids, all of which contribute to the rapid growth and sustaining life of bacteria.
- When compared to chemicals, the efficacy of Converde "ContaminantHalt" is significantly higher. It is 100% organic and has a significantly lower impact on the environment.
- By employing bioremediation, pollutants are degraded into products that are part of naturally occurring cycles.

"ContaminantHalt" Benefits:

- Contains microbes that literally dissolve hydrocarbons
- Works best with water
- Sludge reduction > 50%
- Hydrocarbon recovery > 90%
- "Black" Water Recovery > 90%
- Recovered water can be drained directly to containment or wastewater treatment.
- Improves sludge setting capacity
- Significantly reduces cleanup time and cost

Application: Surface & Submerged Oil Slicks

- A part of the surfactant molecule used in "ContaminantHalt" has an attraction to oil (i.e. it is oleophilic). While another part has an attraction for water (i.e. it is hydrophilic). When Converde "ContaminantHalt" is applied onto an oil slick, the interfacial tension between the oil and water is reduced, resulting in the formation of finely dispersed oil droplets. Typically these droplets will vary in size and, although the larger ones may rise to the surface, a significant amount will remain in suspension.
- When dispersion is successful, a characteristic plume will spread slowly downward from the surface shortly after Converde "ContaminantHalt" is applied. Optimum distribution can be achieved thru mechanical agitation, natural wave action, boat propellers and wakes.
- To disburse submerged oil slicks, dilute "ContaminantHalt" at a rate of 90 to 110 gallons per surface acre in water and inject the diluted solution directly into the oil slick. Injection can be carried out with the aid of high pressure pumps and under water lances.

As the mass disperses, some large pockets of oil may rise to the

- surface. When this occurs, an additional application of Converde "ContaminantHalt" may be required. Effective distribution of Converde "ContaminantHalt" throughout the oil slick is crucial to the success of the process.

Application: Shorelines, Land, Soil & Tailings

- Converde "ContaminantHalt" dispersants can also be used on shorelines including beaches, rocks, soil and sea walls. Shorelines subject to strong wave action are cleaned quickly and naturally. Re-application may be necessary in areas where dense hydrocarbon deposits have accumulated.
- When "ContaminantHalt" is applied to viscous oils on shorelines, where retention time exceeds 24 hours, dilution rates can be increased. Typical dilution rate in water – 50 to 100 PPM.

Converde "ContaminantHalt" Product Label

ContaminantHalt

Contaminant & Sludge Dispersant
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ORGANIC LIQUID CONCENTRATE

COVERAGE AND APPLICATION: 100 gallons per acre foot of land or water (250 liters per hectare); may be adjusted by up to 20% depending upon level and extent of contamination; mix and apply with 30 parts water (30:1 or 30 parts water to 1 part concentrate); apply in 2 applications (50 gallons per application), 3 days apart; reapplication may be required if extensive contamination. Determine the depth of contamination/blockage; if on land, assure adequate tillage to the depth. Incorporate at a rate of 50 gallons per acre foot; dilute with clean water at a rate of one part product to thirty (30) parts water to insure good dispersion; repeat in 3-4 days with remaining 50 gallons. If on land, maintain minimum 10% ground moisture throughout treatment.

IMPORTANT: ALWAYS SHAKE, STIR, OR AGITATE BEFORE USE.
Always add product last to spray tank containing required amount of water.

WARRANTY: Buyer assumes all responsibility for safety and use not in accordance with directions.

KEEP OUT OF REACH OF CHILDREN

HAZARDOUS INGREDIENTS: NONE

HEALTH HAZARDS:

Ingestion: Non-toxic, may cause nausea or diarrhea

Eyes: May cause eye irritation upon contact

CONVERSION EQUIVALENTS (W/WATER MIX):
6400 gallons covers 1 square mile w/ 192000 gallons water
275 gallon tote covers 2.75 acres w/ 8250 gallons water
55 gallon barrel covers 2640 square yards w/ 1650 gallons water
1 gallon covers 48 square yards w/ 30 gallons water
1 quart covers 12 square yards w/ 30 quarts water
1 cup covers 3 square yards w/ 30 cups water
1 tablespoon covers 2 square feet w/ 30 tbsp water
1 teaspoon covers 96 square inches w/ 30 tsp water
25000 liters covers 1 square kilometer w/ 750000 liters water
1041 liter tote covers 4 hectares w/ 31230 liters water
208 liter barrel covers 8320 square meters w/ 6240 liters water
1 liter covers 40 square meters w/ 30 liters water
25 milliliters covers 1 square meter w/ 750 milliliters water



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Safety

The materials used in the production of Converde "ContaminantHalt" are derived from naturally occurring and sustainable sources. "ContaminantHalt" is non-caustic, non-corrosive, non-flammable and environmentally safe. In addition, it is not harmful to animals, plants and humans.

Compliance

Fully complies with EPA Toxic Substance Control Act (TSCA) and the rules, orders and regulations promulgated there under including:

- a) Sections 4, 5, 6 & 7; Title 40 Chapter 1 707.20 thru 707.75;
- b) 40 CFR Sections 704.3, 710.2(e) and 720.3 (c); and
- c) Sections 5 and 13, reference 42FR64583
- d) Does not contain marine pollutants as defined in 49 CFR 171.8