

Zebec Biologicals

Z-BIO DIESEL

Rapid Decontamination of Soil &
Groundwater

PRODUCT DESCRIPTION

Z-BIO DIESEL is a proprietary blend of bacterial cultures selectively adapted specifically for the rapid degradation of the major components of diesel.

The product is particularly effective on benzene, toluene, xylene, naphthalene, methyl naphthalene, anthracene and ^{10}C to ^{17}C aliphatics.

Z-BIO DIESEL has demonstrated to be highly prolific & efficient in the degradation of diesel spills.

Z-BIO cultures are naturally-occurring, selectively adapted & tolerant of high contaminant concentrations.

FEATURES

- Rapidly degrades all major organic components of diesel.
- Can tolerate diesel concentrations inhibitory to many indigenous populations.

ADVANTAGES

- Remediates the site with minimal disruption.
- Provides ultimate remediation technology.
- Provides a natural and ecologically sound approach to remediation.

BENEFITS

- Quickly decontaminates soil and groundwater containing diesel resulting from leaking underground storage tanks, transfer line leaks and spills.
- Eliminates or reduces further environmental damage through biodegradation of contaminant plume.

STUDIES AND PERFORMANCE

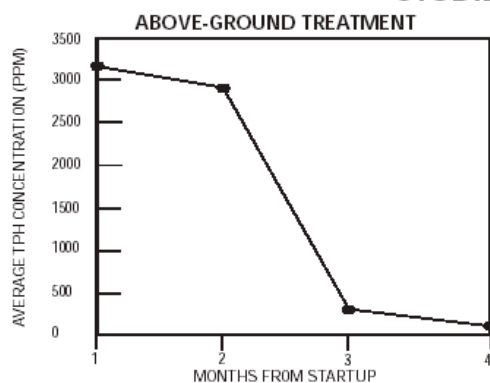


Fig. 1 Z-BIO bacteria destroyed 95% of the contaminants in a period of three months.

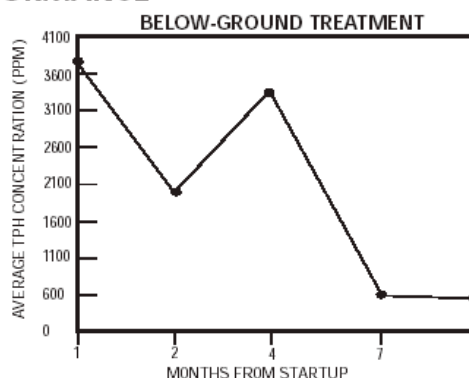


Fig. 2 Z-BIO bacteria destroyed 91% of the contaminants in a period of three months.

The above figures show Z-BIO DIESEL's ability to reduce contaminant concentration in above-ground & below-ground treatment cells. In both cases, nutrient levels, oxygen supply and other conditions critical to optimum bacterial growth were monitored and adjusted as needed. Through lab and field experience, it has found that augmenting or supplementing the existing cultures with Z-BIO cultures *accelerates* the decomposition process and achieves final concentrations below the desired end points in less time than stimulation of indigenous populations.

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FEATURES

- Contains vegetative and spore forming bacterial strains capable of utilizing aerobic, facultative and fermentative metabolic pathways.
- Contains no raw enzymes, surfactants or solvents.
- Rapid germination and outgrowth of spores.
- Bacteria can colonize a wide variety of surfaces to produce long-lasting effects.

PRODUCT CHARACTERISTICS

DRY CULTURE

- Bacteria count 5 billion/gram
- Stability Max loss of 1.0 log/yr when stored under recommended conditions
- pH Range 6.0 - 8.5
- Bulk Density 0.50 - 0.61 g/cm³
- Moisture content 15%
- Appearance Free-flowing, tan powder

AVAILABLE PACKAGING

5kg Container / 25kg Container / 2kg Z-BIO SOCK

LIQUID CULTURE

- Non-stock item. Call for shipping estimate.
- Typically 2-3 weeks backorder.
- Bacteria Count Min. 100 mil/mL, 380 billion/gal at time of manufacture
- Stability Max loss of 1.0 log/6 mos. when stored under recommended conditions
- pH Neutral
- Specific Gravity 1
- Appearance Turbid liquid

AVAILABLE PACKAGING

25 Litre Drum / 200 Litre Container

OPTIMUM CONDITIONS FOR USE

Bacteria in Z-BIO products perform within a Ph range of 6.0 - 9.0, with the optimum typically near 7.0.

Wastewater temperature affects activity, with an approximate doubling in maximum growth rate for each 10°C increase in temperature to an approximate upper limit of 40°C, unless otherwise indicated.

Very low activity can be expected below 5°C.

STORAGE & HANDLING

- Store in a cool, dry place.
- Avoid inhalation. Wash hands thoroughly with warm, soapy water after contact.
- Avoid eye contact.