



PTBAC
PETROLEUM TREATMENT BACTERIA

*Petroleum Treatment Solution Bacteria for
Petroleum Hydrocarbon Bioaugmentation*

Benefits Include

Improves degradation of hydrocarbons
Supplements and improves existing native bacteria proliferation
Economical solution compared to other available products
100% soluble for better injection ROI

Applications

Soil Mixing: Excavation and treatment of impacted soils for backfill or off site use
In-Situ Bioremediation: Direct push injection in groundwater
Soil bio piles and land farming
Combined with petroleum degrading bacteria in bioaugmented treatment approach
Crude Oil and Refined Fuel Spills in oceans, rivers, and on-land
Combined with non-toxic non-ionic surfactant to improve emulsification of residual non-aqueous phase liquids

Target Contaminants

Petroleum Hydrocarbons:
BTEX- Benzene, toluene, ethylbenzene, xylenes
MTBE-
Methyl tert-butyl-ether
GRO- Gasoline Range Organics
DRO- Diesel Range Organics
ORO- Oil Range Organics
Naphthalene
Chlorobenzene
Polycyclic Aromatic Hydrocarbons (PAHs)

PTBacTM contains a blend of facultative bacteria specifically chosen for the petrochemical industries applicable to both aerobic and anaerobic conditions. This product provides a significant boost to biodegradation when combined with PTSTM to reduce time to reach treatment goals and overall costs of remediation operations.

Product Specifications:

Hydrocarbon Bacteria Consortium
40 or 50 Billion CFU/g
Temperature 10-120°F
pH Range of application 4.5-9.0

Optimal Conditions:

70-104°F
6-8

Mixing and Application:

Surface Applications: May be applied directly to soil, sludge or affected area and hydrated during mixing to achieve a minimum of 15% water moisture.

Injection Applications: Mix clean water with PTBacTM and inject into the soil or groundwater zone. Repeat as needed to achieve desired results. For optimal hydration of the bacteria, wait a minimum of 30 minutes after mixing with water but no longer than eight hours. Be sure to use non-chlorinated mixing water with neutral to slightly alkaline pH.

In the case of surficial spills of oil and refined fuels on land, in rivers or other surface water bodies, PTBacTM hydrated solution is sprayed directly onto the oil and petroleum hydrocarbons to promote aggressive biodegradation.

Combine with PTSTM:

Can combine with PTSTM or PTS AdvancedTM in most applications but can also be applied in mechanical remediation systems such as SVE, DPE, MPE and Air Sparge because those systems help induce oxygen and the bacteria benefit from additional nutrients of PTSTM and PTBacTM to increase the rate of biodegradation resulting in faster cleanup.

Safety:

It is safe to aquatic ecosystems, humans, and other living organisms and is ideal for sustainable rejuvenation of soil for reuse in the environment. It is non-toxic, non-caustic, non-acidic, non-pathogenic, non-GMO and is biodegradable.