

Patented and Proven Results

# The Future of Environmental Remediation is Here

ENZYMIX revolutionizes soil and groundwater cleanup with breakthrough enzymatic technology. **Complete remediation in 30-180 days** — converting toxic pollutants to pure CO<sub>2</sub> and water with 100% safety.

PurEnzyme specializes in enzyme-based solutions for hydrocarbon contamination remediation.

Our innovative approach offers **sustainable, cost-effective** alternatives to traditional cleanup methods.

## Core Technology

PurEnzyme utilizes proprietary enzyme formulations that catalyze the breakdown of complex hydrocarbon chains into simpler, biodegradable compounds. Our enzyme technology accelerates natural biodegradation processes by up to 100x compared to traditional methods.

For more information, visit our website [www.purEnzyme.com](http://www.purEnzyme.com)

**Ready to Transform Your Site?**



STEP BY STEP

## The ENZYMMIX Process

Witness the molecular transformation that makes environmental restoration **safer**, **faster**, and **more complete** than ever before.

1

### Enzyme Activation

Targeted deployment to contaminated areas

2

### Molecular Breakdown

Enzymatic digestion of hydrocarbons

3

### Complete Conversion

Transformation to CO<sub>2</sub> and water



### Pristine Environment

100% safe, zero toxic residues

## Technical Specifications

Enzyme Type: **Specialized hydrocarbon-degrading enzyme complexes**

Operating pH Range: 6.0 - 8.5 Operating Temperature: **5°C - 45°C**

Substrate Specificity: **C6-C40 hydrocarbons**

Application Rate: **10-50 L per cubic meter of contaminated soil**

Biodegradation Rate: **70-95% reduction in 3-6 months**

## Mechanism of Action

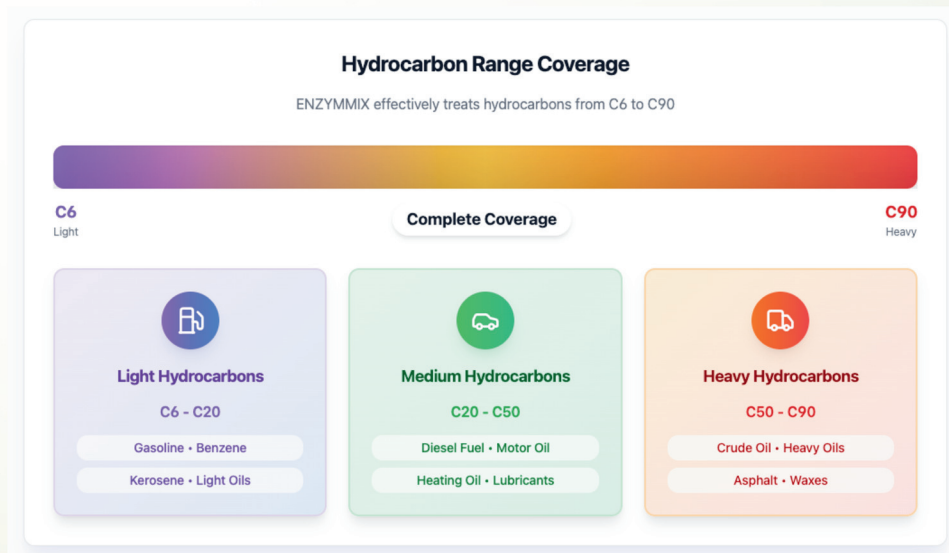
1. Enzymatic Breakdown: **Enzymes break long hydrocarbon chains into shorter fragments**
2. Bioavailability Enhancement: **Surfactant properties increase hydrocarbon accessibility**
3. Microbial Stimulation: **Enhanced conditions promote indigenous bacteria growth**
4. Complete Mineralization: **Final conversion to CO<sub>2</sub>, H<sub>2</sub>O, and biomass**

## Primary Applications

- **Petroleum Refinery Soil Remediation**
  - **Industrial Site Cleanup**
  - **Underground Storage Tank Spills**
  - **Pipeline Contamination**
- **Marine Oil Spills (shoreline treatment)**
  - **Agricultural Land Restoration**
  - **Construction Site Remediation**

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## Treatment Methods

In-Situ Treatment: **Direct injection into contaminated zones for minimal site disruption.**

Ex-Situ Treatment: **Surface Application Method for excavated soil.**

Biopile Treatment: **Engineered soil piles with controlled aeration and moisture**

## Performance Metrics

Average Treatment Time: **3-6 months**

Hydrocarbon Reduction: **70-95%**

Cost Savings vs Traditional Methods: **40-60%**

Site Downtime Reduction: **50-70%**

Carbon Footprint: **80% lower than excavation methods**

## Key Benefits

- **Non-toxic and environmentally safe**
- **Accelerates natural biodegradation**
  - **Minimal site disruption**
- **Cost-effective compared to excavation**
  - **No harmful byproducts**
- **Applicable to various soil types**
- **Effective across a wide temperature range**
- **Scalable from small to large sites**

## Regulatory Compliance

PurEnzyme products are formulated to meet or exceed environmental regulations including EPA standards for soil remediation. All enzymes are biodegradable and GRAS (Generally Recognized as Safe) approved.

## Case Study: Petroleum Refinery

Location: **Industrial refinery site** | Contamination Level: **15,000 mg/kg**

TPH Treatment Duration: **4 months** | Final TPH Level: **850 mg/kg** | Reduction: **94.3%**

Result: **Site successfully restored and returned to operational use**

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