

EOSPRO

Engineered formula of emulsified vegetable oil, nutrients and vitamins optimizes distribution and contaminant degradation



Enriched emulsified vegetable oil used to stimulate anaerobic bioremediation of chlorinated solvents and other recalcitrant chemicals in contaminated groundwater

Product Advantages

- Vitamin B12 and micronutrients
- Slow and fast release substrates
- Engineered for effective transport
- Third party validated
- Food-grade and USDA certified
- 74% fermentable carbon
- Regulatory acceptance

Redox Tech





Description

EOS_{PRO} is a nutrient-enriched, emulsified vegetable oil (EVO). EOS_{PRO} is engineered to quickly stimulate microbial activity while providing long-term nourishment to enhance anaerobic bioremediation of chlorinated solvents, nitrates, perchlorate, energetics, acid mine drainage, and other recalcitrant chemicals in contaminated groundwater. EOS_{PRO} can also be used to reduce redox sensitive metals and radionuclides. The negative surface charges on the droplets combined with small droplet size promote effective transport in the subsurface.

EOS_{PRO} benefits include:

- Vitamin B-12 and micro-nutrients
- Rapidly-biodegradable substrates to “jump start” bacterial growth
- Slow release biodegradable substrates to promote long-term biological activity
- Engineered for effective transport in the subsurface
 - Small oil droplet size
 - Negative surface charge
- Extensive third-party validation

Domestic supply made in the USA with US farmed soybeans.

Chemical & Physical Properties

<u>Oil Emulsion Concentrate:</u> EOS _{PRO}	<u>Typical</u>
Refined and Bleached US Soybean Oil (% by wt.)	59.8
Rapidly Biodegradable Soluble Substrate (% by wt.)	4
Other Organics (emulsifiers, food additives, etc.) (% by wt.)	10
Specific Gravity	0.96 - 0.98
pH (Standard Units)	6 - 7
Median Oil Droplet Size (microns)	1.0
Organic Carbon (% by wt.)	74

Packaging

Shipped in 55-gallon drums, 275-gallon IBC totes or bulk tankers (40,000 lbs.)

Handling & Storage

EOS_{PRO} is shipped as a ready-to-use concentrated emulsion that can be diluted with water in the field to prepare a high quality suspension for easy injection. EOS_{PRO} has a low viscosity and can be distributed with commonly available pumps or by continuous metering with a diluter (e.g., Dosatron™). Dilution ratios for EOS_{PRO} typically range from 4:1 to 20:1 (water: EOS_{PRO}) depending on site conditions. EOS_{PRO} injections should be followed with additional chase water to maximize distribution of EOS_{PRO} into the formation.

EOS_{PRO} can be injected with EOS_{QR}, CoBupH_{Mg} or BAC-9. Call us for more details.

For best performance, use EOS_{PRO} as shipped, within 60 days of delivery and store at a temperature between 40°F (4°C) to 100°F (38°C).