**EDS-QR™**

**Electron Donor Solution – Quick Release**

- **EDS-QR™** is a soluble source of readily available organic carbon and hydrogen
- It complements other Tersus products such as **EDS-ER™**
- This product “jump starts” bacterial growth: ideal choice for projects on a fast track
- 60 lbs. of **EDS-QR™** provides the same amount of hydrogen as 100 lbs. of sodium lactate.
- One dose typically enhances biological activity for 2-3 months

**Principle**

**EDS-QR™** (electron donor solution – quick release) is a fast-acting, completely soluble amendment engineered for enhanced reductive dechlorination of chlorinated solvents or any other anaerobically degradable substance. Our **EDS-QR™** product is USP Kosher Grade 99.7% purity USA sourced from an ISO Certified Plant. A key benefit is that **EDS-QR™** provides more electron equivalence per pound than sodium lactate, so you buy and ship less product. With 99.7% organic carbon, 60 lbs. of **EDS-QR™** provides the same amount of carbon as 100 lbs. sodium lactate. **EDS-QR™** is an ideal choice for projects that are on a fast track. One injection will typically enhance biological activity for 2 to 3 months

One in the aquifer, **EDS-QR™** decomposes to fatty acids and hydrogen used by organohalide respiring bacteria as they transform toxic chlorinated substances such as PCE, TCE, DCE, VC, TCA, CT, and perchlorate. **EDS-QR™** creates a reducing environment to bioremediate explosives (i.e., aromatic nitrates and energetic munitions residuals), nitrates, acids, radionuclides, select oxidized heavy metals, and other contaminants.

**Advantages**

- Short-lived electron donor allows fast geochemical conditioning
- Used in recirculation systems and low permeability zones
- Conforms to EPA’s EPP (Environmentally Preferable Purchasing) and USDA bio-based criteria
- Made from renewable USA-grown crop-based oils
- Ideal for salt-sensitive aquifers

**Field Application Design**

**EDS-QR™** applications are easily tailored to meet site-specific conditions. Typical configurations include distributing **EDS-QR™** until the target zone meets 50 mg/L of TOC. Grid and barrier patterns are also common approaches, as well as applications in excavations or trenches. In these scenarios, **EDS-QR™** is typically 20% of a slow release electron donor such as **EDS-ER™**, allowing rapid conditioning of the aquifer while the slow release electron donor becomes effective. **EDS-QR™**’s low viscosity allows for subsurface distribution through well-pair recirculation systems, direct-push injection points or hollow-stem augers, and it can also be pumped through existing wells. **EDS-QR™** is shipped as a ready-to-use concentrate that can be diluted with water in the field.
Product Content

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS Number</th>
<th>Composition (% wt.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glyceride oils</td>
<td>56-81-5</td>
<td>&gt;99</td>
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</table>

Product Characteristics

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specific Gravity</td>
<td>1.26 @ 25 °C</td>
</tr>
<tr>
<td>Solubility in water</td>
<td>miscible</td>
</tr>
<tr>
<td>Flash Point</td>
<td>390 °F (199 °C)</td>
</tr>
<tr>
<td>Appearance</td>
<td>yellowish translucid oil</td>
</tr>
</tbody>
</table>

Packaging Options

- 55-gallon poly drums
- 275-gallon IBC containers
- 5,000-gallon tankers

Safety

No protective equipment is necessary under normal use conditions. All ingredients consist of food or food grade additives.