



EOS Asia Remediation Co., Ltd.

Experience you can rely on, Products you can trust

EOS vos	<b>PRODUCT INFORMATION SHEET</b> Emulsified Oils Family																			
<p><b>Description</b></p> 	<p>EOS vos is a thixotropic (shear-thinning) emulsified vegetable oil (EVO) formulation of biodegradable oil, nutrients, alkaline buffers, and water designed to mitigate groundwater impacts caused by residual contaminants in the vadose (unsaturated) zone. The patented technology, EOS vos, uses green chemistry to help microbes breakdown contaminants in soil before they reach groundwater. Once injected, EOS vos creates a long-lasting treatment zone for rapid anaerobic biodegradation of chlorinated solvents, nitrates, energetics, and effective reduction of some metals.</p> <p><b>EOS vos benefits:</b></p> <ul style="list-style-type: none"> <li>• The only emulsified vegetable oil formulated to treat the vadose zone</li> <li>• Nutrient enriched and pH neutral</li> <li>• Easy injection and rapid establishment of high vadose zone saturation and reducing conditions necessary for anaerobic reductive dechlorination</li> <li>• Co-injectable with dechlorinating bacterial cultures such as <i>Dehalococcoides mccartyi</i> to stimulate cVOC biodegradation</li> </ul> <p>EOS vos incorporates the same proven patented EOS® technology that clients have trusted for more than a decade combined with technology patented by the US DOE.</p>																			
<p><b>Chemical &amp; Physical Properties</b></p>	<table border="0"> <thead> <tr> <th><b>Oil Emulsion Concentrate: EOS vos</b></th> <th><b>Typical</b></th> </tr> </thead> <tbody> <tr> <td>Refined and Bleached US Soybean Oil (% by wt.)</td> <td>50</td> </tr> <tr> <td>Alkaline Buffer Blend (% by wt.)</td> <td>10</td> </tr> <tr> <td>Thixotropic stabilizer (% by wt.)</td> <td>&lt;1</td> </tr> <tr> <td>Other Organics (emulsifiers, food additives, etc.) (% by wt.)</td> <td>&lt;0.3</td> </tr> <tr> <td>Water (% by wt.)</td> <td>38.8</td> </tr> <tr> <td>pH (Standard Units)</td> <td>7 - 8</td> </tr> <tr> <td>Viscosity (at rest / under shear at 100 rpm*) (cP)</td> <td>257,500 / 830</td> </tr> <tr> <td>Mass of Hydrogen Produced (lbs. H<sub>2</sub> per lb. EOS vos)</td> <td>0.18</td> </tr> </tbody> </table> <p><small>*Measured on a Brookfield Viscometer (Model No. MLVT115) using a No. 67 spindle.</small></p>		<b>Oil Emulsion Concentrate: EOS vos</b>	<b>Typical</b>	Refined and Bleached US Soybean Oil (% by wt.)	50	Alkaline Buffer Blend (% by wt.)	10	Thixotropic stabilizer (% by wt.)	<1	Other Organics (emulsifiers, food additives, etc.) (% by wt.)	<0.3	Water (% by wt.)	38.8	pH (Standard Units)	7 - 8	Viscosity (at rest / under shear at 100 rpm*) (cP)	257,500 / 830	Mass of Hydrogen Produced (lbs. H <sub>2</sub> per lb. EOS vos)	0.18
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<p><b>Packaging</b></p>	<p>Shipped in 55-gallon drums, 275-gallon IBC totes or bulk tankers (40,000 lbs.)</p>																			
<p><b>Handling &amp; Storage</b></p>	<p>EOS vos is shipped as a ready-to-use emulsion that does not require dilution - simple mixing with a drum mixer or recirculation with a gear pump is recommended to lower the viscosity prior to injection.</p> <p>For best performance, use EOS vos within 15 days of delivery and store at a temperature between 40°F (4°C) to 100°F (38°C).</p>																			