EDS-QR™

Electron Donor Solution- Quick Release

A Safe and Proven Quick Release Soluble Carbon Source

EDS-QR™ (Electron Donor Solution – Quick Release) is a high-performance, rapidly soluble amendment designed to facilitate enhanced reductive dechlorination of chlorinated solvents and anaerobically degradable substances. Our EDS-QR™ product is distinguished by its USP Kosher Grade and 99.7% purity, sourced from ISO Certified Plants in the USA.

Key Benefits:

- **Higher Electron Equivalence:** EDS-QR™ offers greater electron equivalence per pound compared to sodium lactate, reducing the quantity needed for purchase and shipping. With 99.7% organic carbon, 60 lbs. of EDS-QR™ provides the same carbon content as 100 lbs. of sodium lactate, making it a cost-effective choice.
- **Fast-Track Projects:** EDS-QR™ is an excellent choice for projects that require rapid results. A single injection can enhance biological activity for 2 to 3 months, expediting the remediation process.

Biodegradation Process: Once introduced into the aquifer, EDS-QR™ undergoes decomposition into fatty acids and hydrogen. These byproducts serve as essential resources for organohalide-respiring bacteria, aiding in the transformation of toxic chlorinated substances such as PCE, TCE, DCE, VC, TCA, CT, and perchlorate.

Versatile Remediation: EDS-QR™ creates a reducing environment that extends beyond dechlorination, making it suitable for bioremediating explosives (e.g., aromatic nitrates and energetic munitions residuals), nitrates, acids, radionuclides, select oxidized heavy metals, and various other contaminants.

Advantages

- **Compatibility:** Compatible with various Tersus electron donors, ensuring flexibility in use.
- **High Fermentable Carbon Content:** Contains over 99% food-grade fermentable carbon, ensuring effective performance.
- **Versatile Injection Methods:** Can be injected into existing wells or via direct push methods. Suitable for use in recirculation systems and low permeability zones, enhancing adaptability.
- **EPA Compliance:** Complies with EPA's Environmentally Preferable Purchasing (EPP) standards, promoting environmental responsibility.
- **Food-Grade Ingredients:** Crafted from renewable USA-grown crop-based oils, ensuring sustainability and safety.
- **Sodium Free:** Ideal for salt-sensitive aquifers, preventing adverse effects.

Field Application Design

Field application designs for *EDS-QR™* can be tailored to meet the specific needs of your site. Typical configurations include grid and barrier patterns, as well as applications in excavations or trenches. The product's low viscosity facilitates subsurface distribution through multiple methods, including direct-push injection points, hollow-stem

augers, or pumping through existing wells. This adaptability allows you to effectively address site-specific conditions and remediation goals.

Achieving uniform distribution of an electron donor is essential for the successful enhancement of anaerobic bioremediation. *EDS-QR™* is delivered as a ready-to-use concentrate that can be diluted with water in the field. The resulting diluted solution has a viscosity nearly identical to that of water. Therefore, we recommend injecting a relatively dilute solution in a single step.

The convenience of on-site dilution is a key feature of *EDS-QR™*. To achieve the desired concentration, simply add the necessary amount of product to a mixing tank and then incorporate water. This flexibility makes it easy to adapt to specific project requirements and ensure efficient anaerobic bioremediation.

Product Content

Chemical Name	Concentration (%)	CAS Number
Glycerin	99.7% min.	56-81-5

Product Characteristics

Parameter	Specification	Parameter	Specification
Rapidly Biodegradable Soluble Substrate (% by wt.)	>99%	Viscosity	~1,500 cP at 20°C
Mass of Hydrogen Produced (lbs. H2 per lb. EDS-QR™)	0.15	Flash Point	199°C (390°F)
Physical State	Hygroscopic viscous liquid	Density	1.26 g/cm3 at 25°C
Appearance	Clear and bright (water like)	Solubility	miscible with water and ethanol in all proportions

Packaging Options

EDS-ER™ is available for shipping in either 55-gallon poly drums or 275-gallon IBC containers, providing flexibility in packaging options to meet your needs.

Safety Observations

It is recommended to always use personal protective equipment (PPE) that matches the specific task when working with any type of chemicals.

Tersus Provides Site-Specific Remediation Programs and Performance Monitoring Plans To Meet Your Budget

Interested in a Site Evaluation? Scan the code to the right or visit tersusenv.com/support.

Interested in shopping online for amendments, supplements, and products to enhance conditions, accelerate clean-up, and reduce field-time? Please visit our online shop at surbec.com.

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