

AquiFix Technical Description

AquiFix™ is an innovative electron donor designed to be compatible and co-injectable with PlumeStop. AquiFix is formulated with both fast-acting as well as long-lasting, slow releasing electron donor materials to drive the biodegradation of chlorinated solvents present in the groundwater. This formulation includes a solid phase source of fatty acids and beneficial nutrients to support the dechlorinating microbe population. It is designed to initially provide a rapid release of organic carbon to quickly establish a reducing environment and provide a hydrogen source to dechlorinating bacteria then followed by slow-release fatty acids to promote and sustain the reductive dechlorination of cVOCs. While the slow-release feature will decrease the frequency of re-application of the product, AquiFix's key benefit is its mobility and compatibility with PlumeStop. This solid-phase organic donor causes minimal interference with target contaminants for adsorption onto activated carbon, enabling AquiFix to be co-injected with the Liquid Activated Carbon safely. In summary, the function of AquiFix is to:

- Serve as a PlumeStop-compatible electron donor to support enhanced reductive dechlorination.
- Quickly create reducing conditions and acclimate dechlorinating bacteria by providing a fast-degrading source of organic carbon.
- Provide a slow-release fatty acids that extends the time between re-applications and offers bacteria a low-level source of organic carbon for efficient and sustained degradation.

Chemical Composition

- Emulsified solid fatty acids
- Sodium lactate
- Water
- Proprietary additives

Properties

Physical State	Liquid
Form	Aqueous suspension
Color	Cream
Odor	Slight
pH	~4.0-6.0 in a 10% Solution
Density	8.34 lb/gal
Viscosity	10-200 cP @ 25° C

Application

AquiFix is diluted with water on site and easily applied with PlumeStop into the subsurface through low-pressure injections using injection wells or by direct push methods.

Storage and Handling Guidelines

Storage

- Shelf life of 1 year
- Store in original tightly closed container
- Store away from incompatible materials (see SDS)
- Store at (40°F to 95°F)
- Do not allow product to freeze or store in direct sunlight

Handling

- Avoid contact with skin and eyes
- Wear appropriate protective equipment
- Do not taste or swallow
- Observe good industrial hygiene practices
- Dispose of waste and residue in accordance with the local authority requirements

Health and Safety

The material is relatively safe to handle, but avoids contact with eyes, skin and clothing. OSHA Level D personal protection equipment including vinyl or rubber gloves and eyes protection are recommended when handling this product. Please review the Safety Data Sheet (SDS) for additional information