

HRC® Technical Description

HRC® is an engineered, hydrogen release compound designed specifically for enhanced, *in situ* anaerobic bioremediation of chlorinated compounds in groundwater or highly saturated soils. Upon contact with groundwater, this viscous, polylactate ester material becomes hydrated and subject to microbial breakdown producing a controlled-release of hydrogen for periods of up to 18-24 months on a single application.

HRC enables enhanced anaerobic biodegradation by adding hydrogen (an electron donor) to groundwater and/or soil to increase the number and vitality of indigenous microorganisms able to perform the naturally occurring process of enhanced reductive dechlorination. During this process, certain naturally occurring microorganisms replace chlorine atoms on chlorinated contaminants with the newly available hydrogen effectively reducing the contaminant to a less harmful substance with the preferred and innocuous endpoints of ethene or ethane.

For a list of treatable contaminants with the use of HRC, view the [Range of Treatable Contaminants Guide](#).



Example of HRC

Chemical Composition

- Glycerol Tripolylactate- CAS #201167-72-8
- Glycerin- CAS #56-81-5
- Lactic acid- CAS #50-21-5

Properties

- pH - 3 (10% solution/water)
- Appearance - Viscous gel/liquid. Amber color
- Odor - Odorless

Storage and Handling Guidelines

Storage

- Store away from incompatible materials
- Store in original tightly closed container
- Store in a cool, dry, well-ventilated place

Handling

- Wash thoroughly after handling
- Wear appropriate personal protective equipment
- Wear eye/face protection
- Provide adequate ventilation
- Observe good industrial hygiene practices

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Applications

- Permanent injection wells
- Direct-push injection (barriers and grids)
- Recirculating wells
- Soil borings
- Excavation applications into soil or on top of bedrock
- Gravity feed into bedrock wells

Application instructions for this product are contained in the [HRC Application Instructions](#).

Health and Safety

Avoid contact with eyes, skin, and clothing. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

Please review the [HRC Safety Data Sheet](#) for additional storage, usage, and handling requirements.