

Starch Breaker Enzyme

Description

LyoStar™ starch breaker enzyme is a component of the ORCA™ for WBM system used for removal of WBM damage and filter cakes in the reservoir. LyoStar slowly degrades starch polymer chains allowing for uniform filter cake removal across the open hole reservoir section.

Benefits

- Non-hazardous for transportation and low hazard for handling and use.
- Restores production and injection within reservoirs blocked with WBM filter cakes containing starch polymers.
- Completely miscible in and compatible with a wide range of completion brine types and brine densities.

Application

LyoStar is a liquid product that is readily dissolved in fresh water, sea water or completion brine. Used for well treatments to remove drilling mud damage in a wide range of wells including oil and gas production wells as well as injection wells. The characteristics of the ORCA for WBM system makes it particularly suited for open hole horizontal/directional wells including slotted liner, standalone screen or gravel pack completions.

Typically used in wells with a bottom hole static temperature below 130°C (266°F).

Treatment Recommendation

Prior to utilizing LyoStar or other components of the ORCA for WBM system, lab testing is required to test for compatibility and effectiveness against the specific type of damage anticipated downhole. Concentration of LyoStar is typically up to 0.5% v/v depending on the concentration of starch within the filter cake. Higher concentrations can be used if required.

LyoStar is compatible with other Cleansorb™ breaker enzymes designed to remove xanthan and cellulose based polymers. Acid precursors can also be incorporated into ORCA for WBM formulations to deliver simultaneous downhole acidizing and polymer breaker treatments.

Typical Physical Properties

Appearance.....Pale to dark brown, solids-free liquid
pH..... 5.0 - 7.5
Specific Gravity..... 1.26 (10.51 lb/gal)
Water Solubility..... Completely miscible

Handling and Storage

LyoStar is stable for at least 18 months if stored in the sealed containers as supplied, out of direct sunlight, below 25°C in northern hemisphere ambient conditions or temperature- controlled storage in hotter climates. Avoid contact with skin and eyes. Use appropriate hygiene, clothing, and personal protective equipment suitable for work being done. Review the SDS thoroughly before using this product.

Packaging

LyoStar is available in: 25-kilogram (25-liter) plastic pails and 1,000-kilogram (1000-liter) IBCs as required.

