



PRODUCT DATA

EnerFrac™ Gelbreak 102

High pH Enzyme Breaker

Description:

EnerFrac™ Gelbreak 102 is a high pH stable enzyme breaker. It is the breaker of choice for fluids having a pH of 6.0 or higher. Conventional enzyme breakers exhibit maximum enzyme activity at a pH of 5 and are less than 50% active at pH 7. In contrast, EnerFrac™ Gelbreak 102 has maximum activity at pH 7 - 8 and greater than 60% activity at pH 10. This makes EnerFrac™ Gelbreak 102 ideally suited for the high pH of borate cross-linked fluids.

Physical Properties:

Form: Liquid
Color: Light Brown
Odor: Fermentation
Charge: NA

Chemical Family: Protein
Solubility: Water, Brines
Wt. per Gal: 9.0 lbs.
Flash Point: None

Application:

EnerFrac™ Gelbreak 102 has a pH optimum range of 6.0 to 9.0 at 100°F (37.8°C). Effective activity is demonstrated over the range of pH 5.0 to 10.5. Values below 5.0 and above pH 10.0 rapidly deactivate the enzyme. EnerFrac™ Gelbreak 102 has a temperature optimum of 110°F (43.4°C) to 125°F (51.7°C) at pH 8.0. Temperature above 150°F (65.6°C) rapidly deactivate the enzyme. Temperatures below 110°F (43.3°C) result in stability. The use rate or dosage of EnerFrac™ Gelbreak 102 will vary according to the application. Polymer type, fluid pH, fluid temperature and the presence of salts (KCl, CaCl₂, etc.) all affect the amount of breaker required for a particular pump time, break time and/or bottom hole temperature. We recommend running break tests to determine the optimum and most economical dosage of EnerFrac™ Gelbreak 102. The desired amount of EnerFrac™ Gelbreak 102 may be diluted with water to a volume which can be metered easily and added continuously on the fly. Batch mixing EnerFrac™ Gelbreak 102 is not recommended as premature gel breaks may occur.

Compatibility:

EnerFrac™ Gelbreak 102 must not be blended with any other additives (except water) prior to use.

Handling and Storage:

EnerFrac™ Gelbreak 102 should be stored in a cool, dry location. Shelf-life is typically 1 - 2 years but can be extended by storing under refrigeration. Keep all containers tightly closed. EnerFrac™ Gelbreak 102 is non-toxic and virtually harmless. It may be irritating if contacted with the eyes. It may irritate the skin of extremely sensitive individuals. Chemical splash goggles and impervious gloves are recommended when handling EnerFrac™ Gelbreak 102. Refer to Material Safety Data Sheet (MSDS) for handling and hazard data.

Packaging:

EnerFrac™ Gelbreak 102 is packaged in 1 gallon, 5 gallon, and 55 gallon containers.

1424 S. Hugh Wallis Road | Lafayette, LA 70508 • Tel: 337.291.2778 | Fax: 337.291.2781

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