



## BIOBREAKER 8100 Gel Breaking Enzyme

PROVIDES CLEAN REPRODUCIBLE BREAKING OF GUAR, XANTHAN & MODIFIED GELS.

The Fracturing fluids are commonly made of aqueous comprising various natural polymers and crosslinking agents alongwith proppant made of sand or ceramic hard particles to transport and placement. This fracturing fluid made up of a high viscosity gel then pumped into a well bore at required pressure to produce lateral fractures opening access to surrounding crude oil and natural gas. In this situation high viscous fluid creates fractures that produce more return potential compared to a fluid that has a lower viscosity. The breaker are this case injected with the high viscosity fracturing fluid to lower the viscosity allowing the fluid to escape from the newly formed cracks.

BioBreaker 8100 is Enzyme with combination of Protein chain used as breakers that randomly hydrolyze polymers. These specialized enzymes are mixtures of mannanase amylase and pectinase in specified ratios. Hence it help to react with guar, cellulose, starch and pectin polymers, respectively. BioBreaker 8100 Enzyme are hydrolases and as are capable of binding with any of the polymers.

### Typical Properties

Form. .... Liquid  
 Enzyme family.....Proprietary  
 Appearance.....Pale yellow to brown  
 Odor.....Fermented  
 Solubility.....Water incl. brine  
 Flash Point.....Not applicable

### Microbiological Parameters

E. Coli Absent in 10 g.  
 Salmonella Absent in 10 g.

### Benefits using BIOBREAKER

- Gives clean reproducible breaks in guar & Xanthan gels
- Non Toxic & stable
- Effective Up To 140 °F
- Functions up to pH 11.0
- Convenient Liquid Form
- Ideal for breaking Borate Gals
- Compatible with wide pH range from between 4 ~ 8.
- Stable in wide temperatures & below freezing
- Produces clean reproducible breaks
- Made in India - Can be formulated as per the requirement

## **MIXING DOSAGE:**

BIOBREAKER 8100 is enzyme based breaker is produced by Fermentation Process & its a natural product and therefore usage is depending upon various site conditions including salinity, pH and working & storage temperature.

Usually, following dosage guidelines are recommended to our US Texas and Midland based cos.

- Hydraulic Fracturing with Borate Gel 0.5 to 1.5 pints per 1000 gallons
- Trenches for 24 to 48 hour break 2.5 to 7.5 pints per 1000 gallons
- Jet Grouting and Hydraulic Fracturing 7.5 to 60 pints per 1000 gallons
- Fluids with high pH will require 1/2 Pint to 1 Pint per 1000 gals

BIOBREAKER 8100 is a concentrated solution and should be diluted in fresh water prior to use.

## **COMPATIBILITY**

Must not be blended with any other additive (except water) prior to use.

## **PACKAGING:**

**265 Gallon Totes**

## **STORAGE INSTRUCTIONS**

BIOBREAKER Enzyme should be stored in cool, dry location. Shelf-life is typically 1-2 years but can be extended by storing under refrigeration. Keep all containers tightly closed. The product 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 Refer to the Material Safety Data Sheet for more detailed information.



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NOTE: Although the data supplied above is believed to be accurate, each user is advised to make an independent determination as to whether the described product is appropriate for a particular use or application, whether such use will comply with all applicable laws or regulations, and whether such use will infringe the intellectual property rights of third parties.