

# BCL-200<sup>™</sup> Aqueous Borate-Based Crosslinker Product Data

BCL-200 is an aqueous borate-containing cross-linker that yields high quality, viscous guar and hydroxypropylguar (HPG) gels. BCL-200 crosslinked guar and HPG gels are stable up to 250°F (121°C).

BCL-200 can provide crosslinking in the following range:

Rapid, spontaneous crosslinking at high pH 9.0-11.0, ideally at pH 10. A buffer agent, such as BUFF-H, is recommended for optimizing the required pH range. BCL-200 is also offered with an included pH buffer system (for information, see technical data for BCL-200-10B).

BCL-200 is used extensively for medium to high temperature hydraulic fracturing operations. BCL-200 is borate based and exhibits the best temperature stability when crosslinked with high quality guar and hydroxypropylguar (HPG) polymers (for information, see technical data for GUAR, HP-GUAR, GAL, and HP-GAL, CPI's Guar and HPG polymer powders and slurries).

When bottom hole temperatures exceed 220°F (104°C), GS-30L, a broad spectrum gelled fluids stabilizer, is recommended to create greatly viscous, thermally stable fracturing fluids.

Note: Due to final pH being a very important factor to the success of any fracturing fluid, pre-job pilot testing is highly recommended.

## Advantages & Benefits

- BCL-200 can be used with guar and HPG based gels.
- BCL-200 exhibits medium to high temperature stability.
- When bottom hole temperatures exceed 220°F (104°C), GS-30L, a broad spectrum gelled fluids stabilizer for high temperatures, is recommended to be used in conjunction with BCL-200.
- BCL-200 can be easily metered with chemical metering pumps.
- BCL-200 provides rapid and spontaneous crosslinking.

# Application

When using BCL-200 to crosslink in high pH (9.0-11.0), a pH buffer such as (BUFF-H) is required. After the gel is hydrated and the proper pH range has been reached, add BCL-200 at 1.0-2.0 gallons per 1000 gal fluid  $(1-2 \text{ L/m}^3)$ . BCL-200-treated fluids will immediately crosslink.

#### Cost

Total well costs are often lower as a result of higher product operational efficiency, fewer performance problems and less rig time. BCL-200 results in lower operational costs when applied.

# Compatibility

BCL-200 is broadly compatible with industry fracturing agents and conventional stimulation additives.

#### **Recommended Treatment**

1.0 – 2.0 gal per 1000 gal of fluid depending on the application.

## Handling

For specific instructions refer to SDS information or as illustrated on product containers.

### **Packaging**

BCL-200 is normally packaged in 330 gal totes.

Specifications	Material Properties
Suitability	Recommended as an aqueous borate-containing cross-linker that yields high quality gels in high pH ranges that is compatible with guar and HPG.
Color	Clear to light yellow liquid
Solubility in Water	Miscible
pH (neat)	Above 12.0
Ionic Charge	Nonionic
Recommended Treatment	$1.0\text{-}2.0$ gallons per $1000$ gal fluid $(1\text{-}2\ \text{L/m}^3)$ depending on the application.

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