ULTRAFRAC[™] Ultra-high Temperature Fracturing Fluid

PROFILES

UltraFracTM is a high performance fracturing fluid system specially designed for high temperature wells up to 230 °C. The fluid has excellent thermal stability and post-frac cleanup performance. It solves the early degradation issue of conventional guar-type fracturing fluids by using a specially designed synthetic polymer as the gelling agent in combination with a proprietary "green" temperature stabilizer.

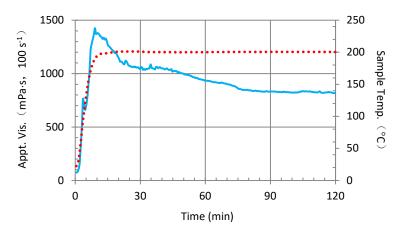
The fluid is easy to prepare and compatible with current on-the-fly operations in the fields. Post fracturing jobs, the fluid breaks into water-thin liquid without any solid residues, making the fracture cleanup easy and more effective.



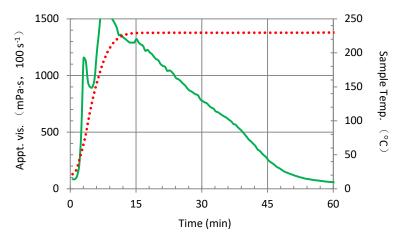
FEATURES

- Ultra-high formation temperature, no precooling
- On-the-fly operation
- Low formation damage
- Low dosage and fast hydration of gelling agent
- Delayed crosslinking for reduced friction pressure
- Robust fluid rheology
- Free of residues associated with guar-type fluids
- Simple to prepare and use with existing field equipment
- Environmentally friendly

TESTING RESULTS



UltraFracTM Fluid, showing viscosity above 800 cps at 200 $^{\circ}$ C and 100 s⁻¹ for 2 hrs. Loading of gelling agent is 15 gpt, equivalent to 0.4 wt% dry polymer.



UltraFracTM Fluid, showing viscosity above 200 cps at 230 °C and 100 s⁻¹ for 45 min. Loading of gelling agent is 17.5 gpt, equivalent to 0.47 wt% dry polymer.

FLUID COMPOSITION

- UltraGel HT Gelling Agent
- SpeedySurf Hydration Aid
- DuraTemp Temperature Stabilizer
- UltraX HT Delayed Crosslinker
- SureBreak HT HT Gel Breaker (optional)

