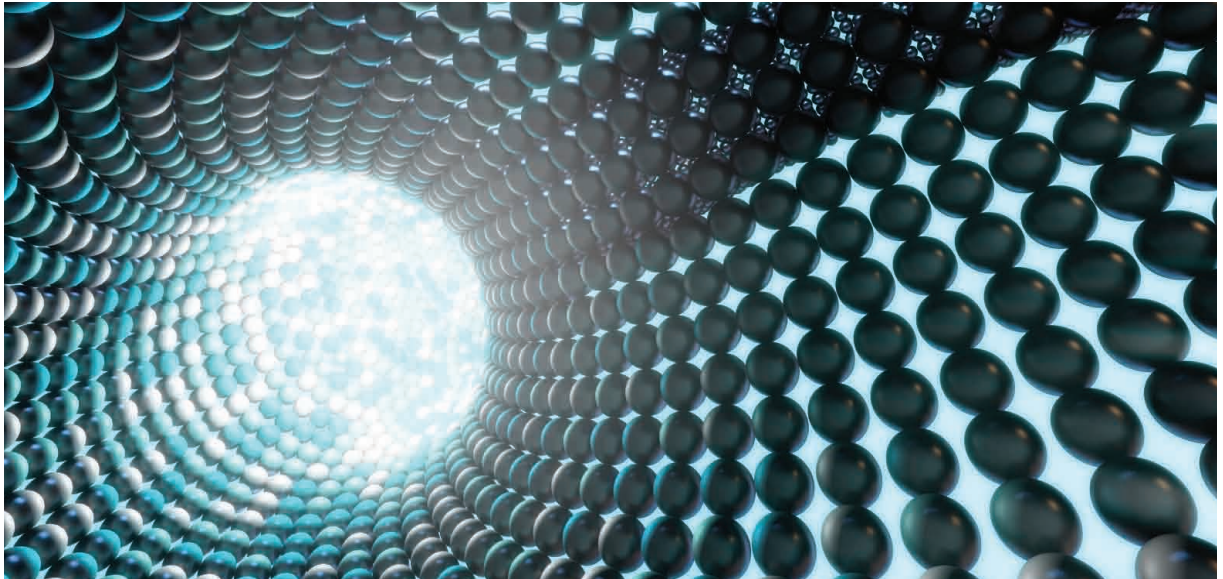


WFR-3B™

Friction Reducer



- High Friction Reduction (FR) Efficiency
- Brine Tolerant
- Sulfate Tolerant
- Excellent Leak-off Control Agent
- Maximize Fluid Efficiency Product
- Environmentally Safe



WFR-3B™ is a patented* innovative friction reducer designed to operate over a wide range of water, from fresh to highly saline. This technology is a polymer-microparticle composition formulated to optimize fracturing performance and maximize fluid efficiency. It is a multifunctional product, acting as a friction reducer and as an ultra-performance leak-off control additive.

WFR-3B™ offers rapid hydration and yield for on-the-fly mixing. It reduces horsepower requirements and lowers friction pressure by 50% to 75%, and it improves fracture conductivity by eliminating residue. As a fluid-loss additive, WFR-3B works to control the leak-off process and avoid potential reservoir damage.

If higher concentrations of WFR-3B™ are needed to build viscosity to help carry sand, such as during a net pressure increase or during a planned “sweep”, Breaker FR™, an innovative catalytic FR breaker, can be used to reduce viscosity and provide a residue-free cleanup.

Friction reduction tests show that WFR-3B™ is an outstanding friction-reduction agent in fresh and brine solutions and is also highly stable in high sulfate waters.

*U.S. Patent Number 07482310

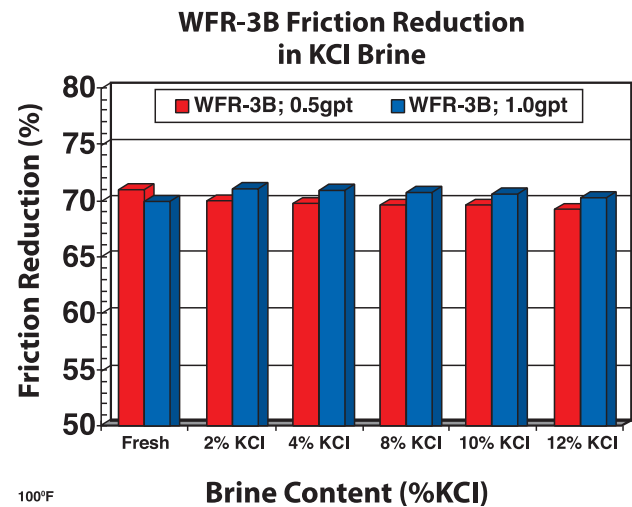
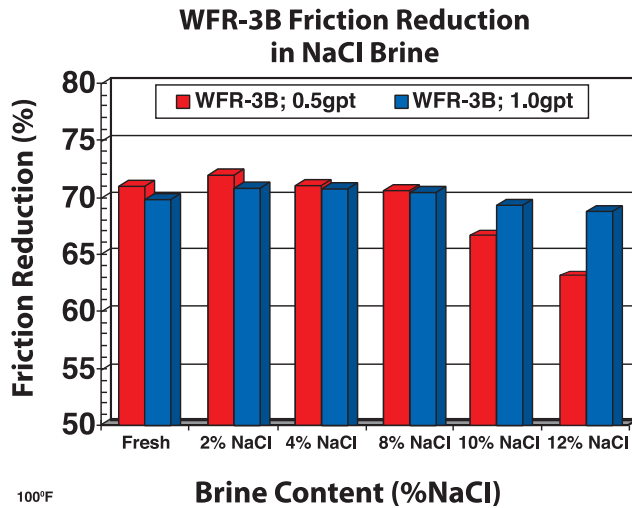


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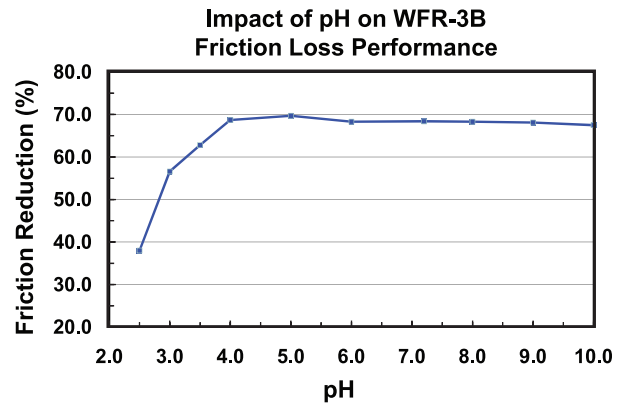
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Services Inc.

Performance Data

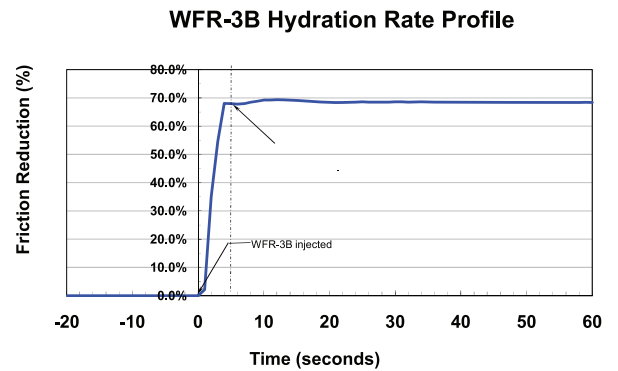
Friction reduction tests show that WFR-3B is an outstanding friction-reduction agent in fresh and brine solutions and is also highly stable in high sulfate waters.



WFR-3B is not impacted by pH levels above 3.5



WFR-3B is noted for rapid hydration rate and yield



WFR-3B, at application dosages, is environmentally acceptable: 4.5% of LC₅₀ of *C. dubia* and *P. promelas*

WFR-3B is compatible with a variety of clay controls, foamers, surfactants, non-emulsifiers, scale inhibitors, fluid-loss agents, and proppants.

Special Handling/Precautions

Refer to the Material Safety Data Sheet (MSDS) for handling and hazard data. Compatibility tests are recommended before use with other additives.

Ordering Information

WFR-3BTM
Part#: x-35-470-1300