

XAN-D

Viscosifier

Product Description

XAN-D is a dispersible, high-molecular-weight biopolymer used for increasing viscosity in water-base drilling fluid systems. Small quantities provide viscosity and weight material suspension for all water-base mud systems. XAN D biopolymer has the unique ability to produce a fluid that is highly shear-thinning and thixotropic.

Typical Physical Properties

Appearance	Cream to Tan Powder
Specific gravity	1.5
Bulk density	50 lb/ft ³ (800 kg/m ³)

Application

XAN D biopolymer is used to increase viscosity for cuttings transport and suspension. It performs effectively in all water-base fluids, ranging from highly weighted to low-solids systems. This includes freshwater, seawater, salt and heavy-brine fluid systems.

XAN D biopolymer delivers an optimized rheological profile with elevated low-shear-rate-viscosity and highly shear-thinning characteristics. These characteristics frequently result in fluids with inverted flow properties, i.e., the yield point being greater than the plastic viscosity. Shear-thinning fluids have low effective viscosities at the high shear rates encountered both inside the drillstring and at the bit. This low effective viscosity generates for minimal pressure losses and standpipe pressures, thus allowing optimized hydraulics and increased rates of penetration. Conversely, for the low shear rates experienced in the annulus, XAN D biopolymer enables the fluid to have a high effective viscosity that adequately suspends cuttings and cleaning of the well.

Advantages

- Highly effective viscosifier, with minimal treatments producing significant results
- Shear-thinning rheological profile for improved hydraulics
- Minimum frictional pressure losses for additional hydraulic horsepower at the bit and low, high shear-rate viscosity for maximum penetration rates
- Viscous laminar flow in the annulus for improved wellbore stability with maximum hole-cleaning and suspension capacity
- Mixes easily

Limitations

- Trivalent ions such as chromium and iron can cause biopolymer precipitation and loss of viscosity or crosslinking
- Intolerant of high-pH or high-calcium-ion conditions
- XAN D systems should be pretreated with either sodium bicarbonate or SAPP and citric acid prior to drilling cement
- Subject to bacterial degradation, a biocide should be used to prevent fermentation
- The slightly anionic nature of XAN D biopolymer requires special mixing procedures when combined with cationic materials

Important Note: These suggestions and data are based on information we believe to be reliable. They are offered in good faith, but without guarantee, as conditions and method of use of our product are beyond our control. We recommend that the prospective user determine the suitability of our material and suggestions before adopting them on a commercial scale.

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Recommended Treatment

The amount of XAN D biopolymer required depends upon the desired viscosity. Normal concentrations range from 0.25 to 2 lb/bbl (0.71 to 5.7 kg/m³) for most mud systems.

Special fluids and difficult hole-cleaning conditions can require higher concentrations of, up to 4 lb/bbl (11.4 kg/m³). The addition of salt, an antioxidant and thermal stabilizer improve temperature stability in fluids from 250 to >280 ° F (121 to >138° C).

Packaging and Storage

XANN D is packaged in 25 kg multi wall bags with PE liner palletized wrapped & strapped. Store in a dry, well-ventilated area.

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