XAN

Viscosifer

Product Description	XAN is a high-molecular-weight linear polysaccharide. XAN provides viscosity, including LSRV, and weight-material suspension for all water-base mud systems. XAN has the unique ability to produce a fluid that is highly shear thinning and thixotropic.	
Typical Physical Properties	Physical appearance	Cream-to-tan powder
	Specific gravity	1.5
	Bulk density	50 lb/ft ³ (8000 kg/m ³)
Application	The primary function of XAN is to increase viscosity for cuttings transport and suspension. The product performs effectively in all water-base fluids from low-solids to highly weighted systems. This includes freshwater, seawater, salt and heavy-brine systems.	
	XAN works to provide a better rheological profile with elevated low-shear-rate viscosity and highly shear-thinning characteristics with low "n" values. These characteristics frequently result in fluids with inverted flow properties (i.e., yield point greater than plastic viscosity). Shear-thinning fluids have low effective viscosities at the shear rates encountered inside the drill string and at the bit. This low effective viscosity for minimal pressure losses and standpipe pressures allows optimized hydraulics and maximized rates of penetration.	
	Conversely, at the low shear rates experienced in the annulus, XAN enables the fluid to have a high effective viscosity for adequately cleaning the well and suspending cuttings.	
	XAN should be added slowly through the hopper to prevent "fish-eyes" and to minimize waste. It should be added at a rate of approximately one 25-kg (55.1-lb) sack every 15 minutes. The time required for the product to yield its ultimate viscosity depends on salinity, temperature and shear.	
	The amount of XAN required depends upon the desired viscosity. Special fluids and hole-cleaning conditions can require higher concentrations.	
	XAN is subject to bacterial degradation. Treatments with a biocide are recommended to prevent fermentation	
Advantages	Highly effective viscosifier	
	 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	
	• Easy to mix	

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.

	XAN	
	Viscosifer	
Limitations	Trivalent ions such as chromium and iron can cause biopolymer precipitation and loss of viscosity or cross-linking	
	Not tolerant of high-pH or high-calcium-ion conditions	
	XAN systems should be pretreated prior to drilling cement	
	Subject to bacterial degradation – a biocide should be used to prevent fermentation	
	The slightly anionic nature of XAN requires special mixing procedures when the product is mixed with cationic materials	
Toxicity and Handling	Handle as an industrial chemical, wearing protective equipment and observing the precautions described in the Material Safety Data Sheet (MSDS).	
Packaging and Storage	XAN is packed in 50 -Ib (25-kg) sacks. Store in a dry location away from sources of heat or ignition, and minimize dust.	

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.