



Drilling Fluids, Inc.

Viscosifier

XANVIS L

Description

XANVIS L is a liquid slurry containing 43% by weight of a highly refined, clarified, completion grade xanthan biopolymer in a dipropylene glycol methyl ether base. It does not contain any oil, clay, or other solids for maximum environmental and formation protection.

Uses

XANVIS L's primary function is to provide solids transport, solids suspension, and friction reduction in applications where dry-powder mixing equipment is not available. It is designed to mix easily in water-based circulating systems to save time, eliminate waste, and improve polymer performance. It is a very efficient viscosifier. It works in most salt and fresh water systems. It should not be used in Calcium Chloride solutions exceeding 9.4 ppg (14% Calcium Chloride by weight). In muds contaminated by calcium the pH should be kept below 10.0 to prevent the precipitation of the XANVIS L. Simultaneous treatment with a biocide such as Ambergaurd 425 may be necessary to prevent the biological degradation of XANVIS L. It can be used in clear brine fluids as the sole viscosifier to provide extremely high Low Shear Rate Viscosity (LSRV). In gel based mud XANVIS L can be used to improve Yield Point for better hole cleaning without significantly increasing solids content.

Benefits

XANVIS L develops extremely high LSRV, the factor most responsible for removal of drilled cuttings on the low side of the well, where fluid moves the slowest (See *Figure A Below*). XANVIS L increases the yield point without increasing the plastic viscosity. XANVIS L continues to work under salt and calcium contamination. XANVIS L does minimal damage to producing formations and can be oxidized from the formation with SDIC, Lithium Hypochlorite, or Sodium Hypochlorite. The liquid form makes for quicker mixing times.

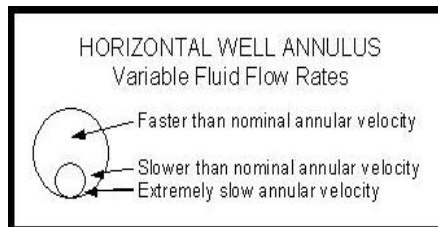


Figure A



Viscosifier

XANVIS L (Continued)

Treatment

XANVIS L is used in various concentrations ranging from 0.5 to 3.0 ppb which is equal to 0.5 to 3.0 quarts per barrel. It should be added through the hopper at a rate of 1 gallon per minute. If hopper is not available you can mix it directly into the mud. XANVIS L will yield more slowly at low fluid temperatures, high salinity, and low shear rate.

Function

XANVIS L develops viscosity through the large molecular size and through molecule interaction. At high concentrations of over 1.5 ppb the molecules become entangled with each other increasing the viscosity.

Typical Physical Properties

Physical appearance:.....Cream to tan colored liquid
Specific Gravity:.....1.104
pH:Neutral

Safe Handling Recommendations

Utilize normal precautions for employee protection when handling chemical products. Use of appropriate respirator, gloves, goggles, and apron is recommended for employee comfort and protection. See Material Safety Data Sheet (MSDS) for this product prior to use.

Packaging

XANVIS L is packaged in 5 gallon pails