



BAROID TUNNEL-GEL[®] PLUS

Viscosifier/Gellant

Description TUNNEL-GEL[®] PLUS viscosifier is a specially formulated, high-yield bentonite designed for use in tunneling and large diameter HDD operations. TUNNEL-GEL PLUS viscosifier promotes rapid viscosity development while maintaining effective borehole stabilization and enhanced filtration control in most water-based drilling fluids.

Applications/Functions *The use of TUNNEL-GEL PLUS viscosifier assists or promotes the following:*

- Enhanced viscosity development in freshwater drilling fluids
- Effective cuttings transport and suspension characteristics
- Enhanced filtration control and resulting borehole stability
- Effective lubrication fluid for microtunneling operations

Advantages

- Easy to mix and quickly reaches maximum viscosity
- Enhances fluid lubricity for reduction of required jacking forces
- Yields more than twice as much drilling fluid of the same viscosity as an equal concentration of API grade bentonite

Typical Properties

▪ Appearance	Yellow to tan powder
▪ Specific gravity, g/cm ³	2.6
▪ pH (3% Solution)	10.4

Recommended Treatment

- To optimize the yield and performance of TUNNEL-GEL PLUS viscosifier, pre-treat make-up water with soda ash (sodium carbonate) at a concentration of 0.5 – 1.0 kg/m³ to reduce excess calcium hardness to ≤100 mg/l and adjust pH to a range between 8.5 – 9.5.
- Using a Venturi hopper, or a colloidal mixer, add TUNNEL-GEL PLUS viscosifier, slowly and uniformly to the entire circulating system or mix tank.

Approximate Amounts of TUNNEL-GEL PLUS viscosifier Added to Water Based Fluids		
lbs/bbl	lbs/100gallons	kg/m ³
8.4 – 12.6	20 – 30	25 – 35

Packaging TUNNEL-GEL PLUS viscosifier, is packaged in 25-kg (55.1-lb) multiwall paper bags.