PREMIUM GEL® NT

API GRADE BENTONITE

DESCRIPTION

PREMIUM GEL NT is a 200 mesh, high-purity, natural sodium bentonite that meets API 13A Section 10 specifications. PREMIUM GEL NT is designed to produce viscous slurries in freshwater when mixed at dosages of roughly 6% to 10% solids by weight. It is completely polymer free.

RECOMMENDED USE

PREMIUM GEL NT can be used as a stand-alone drilling fluid or used as the base for a higher-yield fluid with additional extending polymer. PREMIUM GEL NT can serve as an excellent filtrate-reducing material for use with cement-bentonite formulations. As a completely polymer-free bentonite, it is ideal for cement-mixes where minimizing waterbleed is important. PREMIUM GEL NT can also be used as a seal for earthen structures, slurry trenching, tunnel boring, and foundation drilling.

PURITY

100% natural Wyoming bentonite consisting primarily of sodium montmorillonite with trace amounts of quartz, feldspars, and calcite.

CHARACTERISTICS

- Completely free of polymers and salts and conforming to API 13A Section 10 specifications for untreated bentonite
- Cools and lubricates drill-bits and cutting surfaces
- Good dispersibility and rapid viscosity development
- Improves rate of penetration and efficiently removes cuttings from around bit
- Reduces filtrate loss out into formation and produces thin, tight filter cake for improved borehole stability
- Reduces water bleed and decreases permeability in cementitious mixes
- Suspends solids for easy removal from hole

MIXING AND APPLICATION

Mixing ratios are based on the use of freshwater and water purity will impact bentonite performance. For best results, acidic and hard makeup water should be pretreated with SODA ASH to a pH of 8.5-9.5. Add PREMIUM GEL NT slowly through jet/hopper mixer.

PACKAGING

~50 lb (~22.7 kg) bag, 48 or 70 per pallet, ~1 ton supersacks, or bulk. All pallets are plastic-wrapped.

SLURRY PROPERTIES - 6.04% SOLIDS			
Property	Typical Value	Specification	Procedure
Viscosity FANN 600 rpm	27 cps	None	ACC TP-2005
Yield - 42 gal bbl of 15 cps slurry/ton	80 - 90 bbl/tn	None	ACC TP-2001
Marsh Funnel, seconds/quart	39 seconds	None	ACC TP-1014
Apparent Viscosity (AV)	13 to 14 cps	None	ACC TP-2005
Plastic Viscosity (PV)	10.5	None	API 13A Section 10
Yield Point, lb/100 ft^2	4.5 lb/100 ft^2	None	API 13A Section 10
Filtrate, 30 minutes @ 100 psi, mi	13.7ml	None	ACC TP-2003
pH	9	None	ACC TP-1018
API 13A SECTION 10 TESTING SLURRY PROPERTIES - 6.67% SOLIDS			
Property	Typical Value	Specification	Procedure
Dispersed Plastic Viscosity	10.5 cps	Minimum of 10	API 13A Section 10
Dispersed Filtrate	810.2	Maximum 12.5 cc	API 13A Section 10
YP/PV Ratio	0.43	Maximum 1.5	API 13A Section 10
GENERAL PROPERTIES			
Property	Typical Value	Specification	Procedure
Moisture %	7-10%	None	ACC TP-2006
Specific Gravity	2.5	None	Generally Recognized
Bulk Density Non-compacted	53 lbs/ft^3	None	ACC TP-1005
Bulk Density Compacted	72 lbs/ft^3	None	ACC TP-1005
Grit % (<75 micron)	3.0%	4.0% Maximum	ACC TP-2004
Particle Sizing	70% Min passing #200 mesh sieve	None	ACC TP-1018

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MINERALS TECHNOLOGIES

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