

PREMIUM GEL®

API GRADE BENTONITE



Certified to NSF/ANSI/CAN 60

DESCRIPTION

PREMIUM GEL is a 200-mesh, high-purity, natural sodium bentonite that meets API 13A Section 9 specifications. PREMIUM GEL is designed to produce viscous slurries in freshwater when mixed at dosages of roughly 4% to 8% solids by weight. PREMIUM GEL is certified to NSF/ANSI/CAN Standard 60, Drinking Water Treatment Chemicals - Health Effects.

RECOMMENDED USE

PREMIUM GEL can be used as a stand-alone drilling fluid or used as the base for a higher-yield fluid with additional extending polymer. Extension up to 150 bbl/ton is possible. PREMIUM GEL can serve as a filtrate-reducing material for use with cement-bentonite formulations. PREMIUM GEL can also be used as a seal for earthen structures, slurry trenching, tunnel boring, and foundation drilling.

PURITY

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

CHARACTERISTICS

- Cools and lubricates drill-bits and cutting surfaces
- Good dispersibility and rapid viscosity development
- Improves rate of penetration versus water alone since cuttings are efficiently removed
- Reduces filtrate loss to the formation and produces thin, tight filter cake for improved borehole stability

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 slowly through jet/hopper mixer.

PACKAGING

~50 lb (~22.7 kg) bag, 48 or 70 per pallet, ~100 lb (~45.4 kg) 35 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	40 cps	30 cps Min - API 13A Section 9
Yield - 42 gal bbl of 15 cps slurry/ton	90 - 120 bbl/tn	90 Min - API 13A Section 9
Marsh Funnel, seconds/quart	42 seconds	ACC TP-1014
Apparent Viscosity (AV)	15 to 25 cps	ACC TP-2005
Plastic Viscosity (PV)	9 - 10	ACC TP-2005
Yield Point, lb/100 ft ²	15 - 25 lb/100 ft ²	ACC TP-2005
Filtrate, 30 minutes @ 100 psi, ml	13 - 15 ml	15 ml Max - API 13A Section 9
Filter Cake, in	3/32 in	N/A
pH	9.03	ACC TP-1018
GENERAL PROPERTIES		
Property	Typical Value	Specification/Procedure
Moisture %	7.4%	ACC TP-2006
Free Swell	28	ASTM D-5890
Plate Water Absorption	622.80%	ASTM E946-92
Specific Gravity	2.5	Generally Recognized
Bulk Density Non-compacted	53 lbs/ft ³	ACC TP-1005
Bulk Density Compacted	72 lbs/ft ³	ACC TP-1005
Grit % (<75 micron)	3.2%	4.0% Max - API 13A Section 9
Particle Sizing	70% Min passing #200 mesh sieve	ACC TP-1015

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