PREMIUM GEL®

API BENTONITE

DESCRIPTION

PREMIUM GEL is a 200 mesh, 90 bbl yield sodium bentonite for freshwater drilling, slurry walls, and tunnel boring. PREMIUM GEL complies with API 13A Section 9, Specifications for Drilling Fluid Materials.

RECOMMENDED USE

May be used for all types of freshwater mud rotary drilling where higher solids are desired. PREMIUM GEL can also be used as a seal for earthen structures, slurry trenching, tunnel boring, and foundation drilling.

CHARACTERISTICS

- Cools and lubricates bit
- Mixes quickly and easily
- Reduces fluid loss into the formation
- Removes cuttings
- Stabilizes borehole

MIXING AND APPLICATION:

Mixing ratios are based on the use of freshwater; water purity will affect bentonite performance. For best results, acidic and hard make-up 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 per pallet, 100 lb (45.4 kg) bag, 35 per pallet, 1 ton or 2 ton supersacks, or bulk. All pallets are plastic-wrapped.

DRILLING FLUID AND SLURRY TRENCHING - PREMIUM GEL MIXING RATIO IN POUNDS (KG) PER 100 GALLONS (380 LITERS) OF WATER		
Condition	Lbs (kg) of PREMIUM GEL	% Solids
Normal Conditions	30 - 50 lbs (13.5 - 22.5 kg)	3.5 - 5.7%
Sand and Gravel	50 - 70 lbs (22.5 - 31.5 kg)	5.7 - 7.7%
Fluid Loss Control	70 - 80 lbs (31.5 - 36 kg)	7.7 - 8.8%
SLURRY PROPERTIES - 6.04% SOLIDS		
Property	Typical Value	Specification/Procedure
Viscosity FANN 600 rpm	40 cps	30 cps Min - API 13A Section 9
Viscosity FANN 6 rpm	11 cps	ACC TP-2005
Viscosity FANN 3 rpm	11 cps	ACC TP-2005
Yield - 42 gal bbl of 15 cps slurry/ton	90 to 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 to 10	ACC TP-2005
Yield Point, lb/100 ft^2	15 to 25 lb/100 ft^2	ACC TP-2005
Filtrate, 30 minutes @ 100 psi, mi	13 to 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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