

# PREMIUM GEL® DP

## 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

25 kg bag, 40 per pallet, 650 kg or 1 ton big bag. All pallets are plastic-wrapped.

### DRILLING FLUID AND SLURRY TRENCHING – PREMIUM GEL® MIXING RATIO IN KG PER 1000 LITERS OF WATER

CONDITION	KG OF PREMIUM GEL®	% SOLIDS
Normal Conditions	35–57 kg	3,5–5,7%
Sand and Gravel	58–77 kg	5,8–7,7%
Fluid Loss Control	78–88 kg	7,8–8,8%

### MUD 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 ft²	15 to 25 lb/100 ft²	ACC TP-2005
Filtrate, 30 minutes at 100 psi, ml	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 Noncompacted	849 kg/m³	ACC TP-1005
Bulk Density Compacted	1153 kg/m³	ACC TP-1005
Grit % (<75 micron)	3,2%	4,0% Max – API 13A Section 9
Particle Sizing	70% Min passing 75 µm sieve	ACC TP-1015