

Technical Data Sheet

Pileman[®] Tunneling

General Description:

Pileman[®] Tunneling is selected grade bentonite being Processed using precise addition of processing chemicals and through extrusion process to offer a well-balanced rheology even without any supporting polymer.

This product is designed to work at a dosage between 45- 50kg/m³. Use of this product is recommended as face support on both micro and large slurry TBM's on all conventional soil types.

When used as a side support, the product mix with Easy bore Gel polymer will result in exceptional reduction in tunnel pressure

Product features:

- Economical.
- Use additives only when the soil strata demands
- One product designed to drill effectively in Sand, Silt and Rock

The rheology as given in the table on your right is appropriate to dill under normal conditions. However with different soil profile, this product can easily adapt change in Rheology with polymer additives like Easy-Bore & AM-PAC. The following chart guides through the different Rheology achieved. The mud density and filter cake thickness can be controlled using 45Kg/m³ bentonite concentration.

Parameter	unit	Results
Free Swelling Volume	ml	30-37
pH (3% dispersion)	-	8.0- 9.5
Moisture	%	12 max
Loose Bulk density	g/cm ³	0.85±10%
Dry residue # 200	%	15 max
Wet residue # 200	%	< 2%

Concentration	Kg/m ³	50
Hamilton Beach mixer 11000 RPM, 20 minutes		
Marsh Funnel Viscosity	Sec/qt	
Fann Viscosity		
@600	rpm	35
@300	rpm	31
@6	rpm	20
Apparent Viscosity	cPs	17.5
Plastic viscosity	cPs	4
Yield Point	lb./100ft ²	27
10s Gel Strength	lb./100ft ²	18
10min Gel Strength	lb./100ft ²	20
Filtrate Loss (under 100 psi after 30min)	ml	22
Water Hardness	ppm	DW

Clay @ 45Kg/m ³			Clay @ 50Kg/m ³		
	Polymer added per m ³ of water Easy-Bore Gel 500gm AM-PAC 100 gm		Polymer added per m ³ of water Easy-Bore Gel 500gm AM-PAC 100 gm		
Fann Reading	Instant	After 1 hour ageing	Instant	After 1 hour ageing	
600 RPM	34	38	42	46	
PV	4	5	5	6	
YP	26	28	31	34	
10" Gel	8	8.5	9	10	
10' Gel	8.5	-	10	-	
Fluid Loss	-	20 ml	--	19 ml	



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ISO 9001 : 2015 Quality System

Corporate & Marketing Office :

32A,Chittaranjan Avenue, Calcutta 700012, India

Ph: +91 33 4007 2855 | Mobile: +91 9831013136

Fax: +91 33 2212 2040

Email: amrfeo@amrfeo.com or amrfeo@gmail.com

Web : www.amrfeo.com

Bentonite Processing plant :

Survey no: 583/1 plot 2-6, Bhuj Baccho Road

Kutch – Gujarat , India

Only in-house production & process:

Bentonite | Drilling Polymer & Cellulose | Drilling Foam | Bentonite Pellets| Super Absorbent Clay