

Technical Data Sheet

Easy-Bore™

Partially Hydrolyzed Polyacrylamide

General Description:

Easy-Bore™ a co-polymer of anionic character having high molecular weight. A water-soluble polymer which is primarily used as an efficient fluid loss reducer and viscosifier. An effective colloid for shales and cutting in fresh water, calcium, sodium brines and KCL mud systems. It is compatible with most of the drilling fluid products, biopolymers, PAC, CMC etc. It maintains hole stability by preventing shale swelling and erosion.

Product Features and Advantages:

- Functions as an inhibitor by coating or encapsulating formation & cuttings on shale and reactive clays
- Prevents Bit balling.
- Can be used as a flocculent in clear water drilling.
- It is well suited for Low solid mud as an extender to increase the viscosity with minimum solid content.
- The minimum solid mud can be formulated to maximize the Rate of Penetration.
- Provides good hole cleaning capability.
- Reduces drill torque
- Reduces skin friction and overall tunnel pressure during Micro Tunnelling

Physical Properties:

Appearance	:	Viscous Gel
Solubility in water (at 25°C)	:	Highly soluble
pH (3% solution)	:	8
Ionic character	:	Anionic
Degree of hydrolysis	:	25%-40%
Solid Content	:	14.7%
Specific gravity	:	1.03

Typical Rheology of Easy-Bore™ in fresh water:

Concentration	kg/m ³	19.12	14.09	9.39	4.69	2.6
Fann Viscosity						
at 600	rpm	37	30	22.5	13.5	9
at 300	rpm	26	21	15.5	8.5	5.5
at 200	rpm	21	17	12.5	7	4.5
at 100	rpm	14	11	8	4.5	2.5
at 6	rpm	2	1.5	1	0.5	0
at 3	rpm	1	1	0.5	0	0
apparent viscosity	mPas	18.5	15	11.25	6.75	4.5
plastic viscosity	mPas	11	9	7	5	3.5
Yield point	lb./100 sq."	15	12	8.5	3.5	2
Marsh funnel	sec	50	47	44	41	39

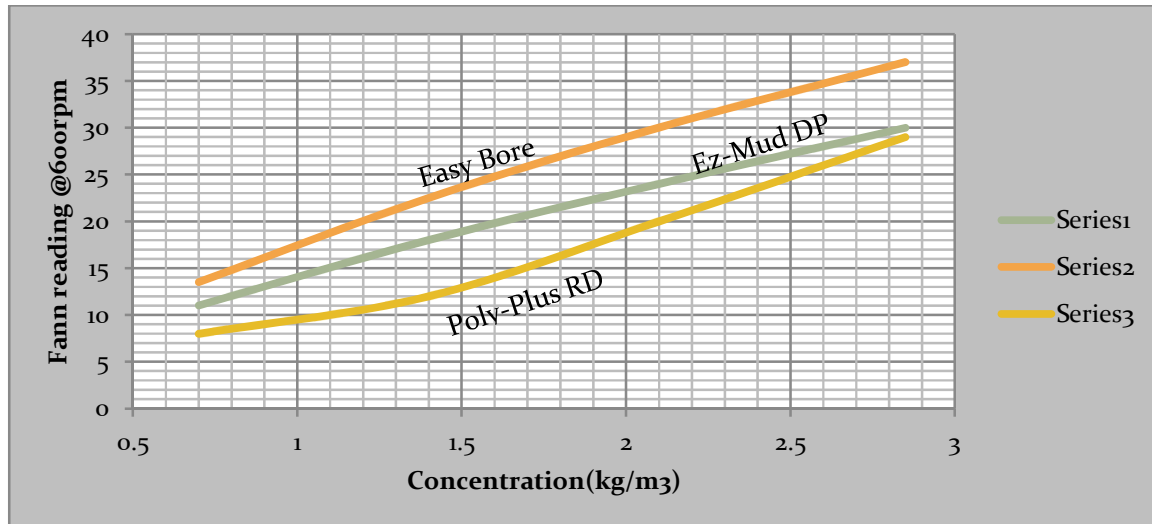
Remarks:

The makeup water should be free from excess Chlorides and Carbonates, which otherwise affect the performance of the polymer. Recommended level, total hardness and total Chloride to be < 150ppm
Soda ash light should be used in small proportion to bring down the hardness level.

Method of use:

Simply add the desired quantity of Easy-Bore™ in fresh water under continuous mixing for 10mins to achieve the Rheology as per chart. Please refer the above table on dosage concentration.

Performance Graph:



**Easy-Bore™ which is a gel polymer was compared with other branded products supplied as PHPA powder. Easy-Bore™ was considered on equivalent solid content basis at 14.7%



Easy-Bore™ is available in standard 25 Kgs Packing

For use as a Bentonite extender:

Easy-Bore™ can be effectively used as a bentonite extender and delivers best result with use of Pileman® bentonite powder.

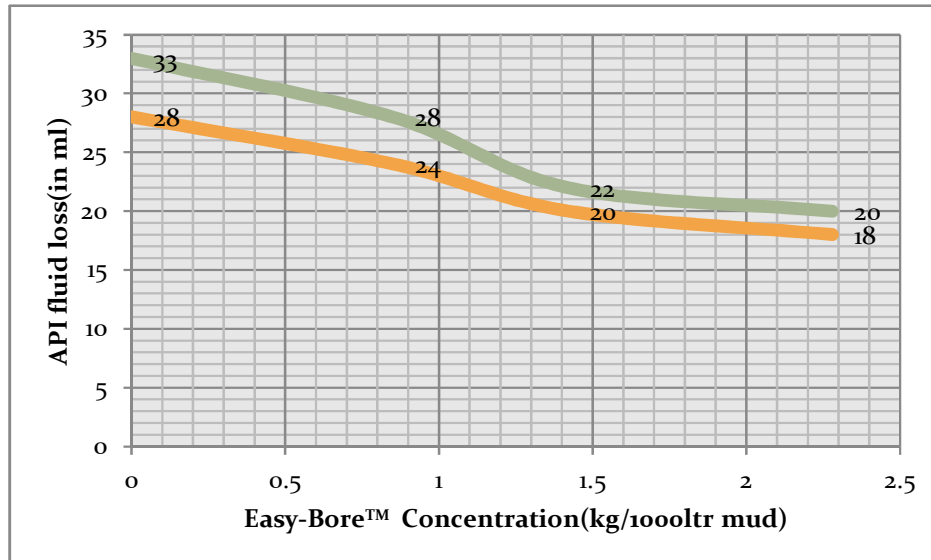
Fresh Water	Quantity of Pileman® required	Added Easy-Bore™	VDR		PV	10" Gel	Mixing Time
			600rpm	300rpm			
1000ltr	50kg						
		0.350kg	37	33	4	20	20 min
		0.500kg	40	34	6	19	20 min
		0.750kg	43	36	7	20	20 min
		1.000kg	46.5	39	7.5	17	20 min

Typical Values (for reference only)

For use as an excellent Fluid Loss control additive:

Easy-Bore™ can be used in standards bentonite slurries to reduce the fluid loss properties. Reducing fluid loss will assist:

- Maintain hole integrity
- Protect water sensitive shales
- Minimize hole washout to achieve better casing cement jobs



Legends:



Bentonite slurry@30kg/m3
Rheology of 27 VDR @600 RPM



Bentonite slurry @60kg/m3
Rheology of 6VDR@600 RPM



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[Star Export House accreditation by Govt. of India]

ISO 9001 : 2015 Quality System

Bentonite Processing plant :
Survey no: 583/1 plot 2-6, Bhuj Bacaho Road
Kutch – Gujarat , India

Only in-house production & process:
Bentonite | Drilling Polymer & Cellulose | Drilling Foam | Bentonite Pellets | Super Absorbent Clay