

VELOCITY-PRO®

ULTRA YIELD BENTONITE DRILLING FLUID



Certified to
NSF/ANSI 60

DESCRIPTION

VELOCITY-PRO is an easy mixing, high viscosity 230 bbl yield freshwater drilling fluid produced from the highest grade Wyoming sodium bentonite. VELOCITY-PRO is certified to NSF/ANSI Standard 60, Drinking Water Treatment Chemicals - Health Effects.

RECOMMENDED USE

Should be used for all types of freshwater mud rotary drilling, including all vertical well drilling and horizontal drilling applications.

CHARACTERISTICS

- Improves cuttings removal
- Improves circulation and helps prevent fluid loss
- Increases viscosity and lowers drilling fluid filtrate
- Highly concentrated for maximum yield
- Mixes quickly and easily in freshwater
- Improves borehole stability
- Increases penetration rates
- Cools and lubricates bit and drill pipe
- Reduces torque and helps control pressures

MIXING AND APPLICATION

Mixing ratios are based on 230 bbl yield material using freshwater. Level of water quality will affect all bentonite performance. Prior to mixing, acidic and hard water should be treated with SODA ASH to a pH of 8.5-9.5. For best results, add VELOCITY-PRO slowly through a venturi(jet hopper) mixer.

PACKAGING

50 lb (22.7 kg) bags, 48 per pallet, 1 ton or 2 ton supersacks, or bulk. All pallets are plastic-wrapped.

DRILLING FLUID AND SLURRY TRENCHING - VELOCITY-PRO mixing ratio in pounds (kg) per 100 gallons (380 liters) of water		
CONDITION	LBS (KG) OF VELOCITY-PRO	% SOLIDS
Normal Conditions	15 - 30 lbs (7 - 14 kg)	1.7 - 3.4%
Sand and Gravel	20 - 30 lbs (9 - 14 kg)	2.3 - 6.9%
Fluid Loss Control	25 - 35 lbs (12 - 16 kg)	2.9 - 4.0%
SLURRY PROPERTIES - 2.78% SOLIDS		
PROPERTY	TYPICAL VALUE	SPECIFICATION/ PROCEDURE
Viscosity FANN 600 rpm	42 cps	30 cps Min - ACC TP-2005
Viscosity FANN 6 rpm	15 cps	ACC TP-2055
Viscosity FANN 3 rpm	12 cps	ACC TP-2055
Yield - 42 gal bbl of 15 cps slurry/ton	234	200 Min - ACC TP-2001
Marsh Funnel, seconds/qt	48 seconds	ACC TP-1014
Apparent Viscosity (AV)	21	15 Min - ACC TP-2005
Plastic Viscosity (PV)	9	ACC TP-2005
Yield Point, lb/100 ft ²	24	ACC TP-2005
Filtrate, 30 minutes @ 100 psi, ml	17.4 ml	ACC TP-2003
Filter Cake, in	2/32	N/A
pH	9.0	ACC TP-1018
GENERAL PROPERTIES		
PROPERTY	TYPICAL VALUE	SPECIFICATION/ PROCEDURE
Moisture %	7.5%	ACC TP-2006
Free Swell	29 ml	ASTM D-5890
Plate Water Absorption	810.05%	ASTM E946-92
Specific Gravity	2.5 g/cc	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)	1.8%	4.0% Max - ACC TP-2004
Particle Sizing	70% Min passing #200 mesh sieve	ACC TP-1015

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