



The BIG-FOOT[®] polymer slurry system is formulated to make a viscous slurry fluid to fortify the most challenging soil conditions. BIG-FOOT soil stabilizing polymer is an easy mixing, 100% active polymer packaged as a granular powder.

Due to its concentrated formula, small amounts of BIG-FOOT earth-reinforcing polymer mixed with fresh water builds high viscosity. BIG-FOOT is ideal for drilled shafts, mini-piles, slurry trenching, diaphragm walls, HDD, reverse circulation (RC) rotary drilling and tunneling.

Benefits of BIG-FOOT

- Stabilizes reactive clay and shale formations
- Mixes smoothly into flowing water with minor sheer
- Self-cleaning no solids equipment required
- Improves skin friction & end bearing capacity
- Non-gelling, even at high viscosities, facilitating settlement of fines and maintenance of a clean fluid
- Binds excavated sand & gravel soil for fast drilling and removal of spoils

TYPICAL PROPERTIES	
Appearance	White granular solid
pH (0.25% Solution)	8.5 to 9.0
Specific Gravity	1.00-1.01 (water= 1.0)
Bulk Density lb/ft ³	52
Odor	Odorless

MIXING DOSAGE: BIG-FOOT should be mixed at a minimum rate of 8 to 9 lb/1,000 gal of fresh water pretreated with M-BOOSTER[®]. For larger projects this should be done in a properly designed mixing tank.

SOIL FORMATION	BIG-FOOT [®] POLYMER MIX DOSAGE*			MARSH FUNNEL VISCOSITY
	lb/yd ³	lb/1,000 gal	kg/m ³	sec/qtr
Clay & Shale	0.8-1.0	4.0-5.0	0.5-0.6	40-45
Silt & Fine-Medium Sand	1.2-1.25	6.0-6.5	0.7-0.75	50-55
Coarse Sand-Pea Gravel	1.4-1.6	7.0-8.0	0.8-0.9	60-70
Gravel-Cobble	1.7-2.0	9.0-10.0	1.1-1.2	75-95

* In application where brackish, salt or seawater contaminates slurry or is used as make-up water,



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MIXING FORMULA (IN ORDER OF ADDING):

- 1 Prepare the make-up water** by adding M-BOOSTER at a concentration of 6 to 7 lbs/1,000 gal (0.7 to 0.8 kg/m³) for a target pH of 9.0 to 10.0.
- 2 Add BIG-FOOT polymer** through the same mixer at a dosage of 8.0 to 9.0 lb/1,000 gal (1.0 to 1.1 kg/m³) of mix water depending on desired viscosity.
- 3 Check slurry properties** as listed below and record time taken. Check slurry properties when each hole is completed and make required adjustments to bring slurry back into desirable property range.
- 4 Once desired slurry properties are reached, the slurry is ready for use.**
- 5 The slurry level should always be higher than the water table** or river level in the open-hole section to maintain a constant hydrostatic loading on excavation.
- 6 Measure Marsh funnel viscosity.** Target viscosity should be in the range of 70 to 80 sec/qt.
- 7 If Geology consists of gravels and sand with little or no fines add FORTIFY[®]** at a concentration of 5 to 6 lb/1,000 gal (0.6 to 0.7 kg/m³) via MATRIX high shear mixer to promote enhanced rate of hydration and reduce the amount of un-yielded material ("fish eyes").

On smaller projects or mobile projects, such as Transmission Line and Cell Towers, BIG-FOOT may be added at the excavation by sprinkling carefully into a stream of water directed into the excavation or an agitator mix tank.

Fanning the water stream over a sloping pan or across the blade of an auger facilitates lump-free mixing. If mixed directly in excavation, the tool should be reciprocated gently after product is added to distribute and homogenize the polymer. After completing the addition of BIG-FOOT into the excavation raise and lower the drilling tool from the top of the excavation to the bottom to assist in the proper distribution of the product.

For best results add 6-7-lb M-BOOSTER/1,000 gal of mix water for a pH of 9-10.

- Total chloride (salt) should be less than <1500 ppm (mg/L).
- Total hardness (calcium) less than <100 ppm.
- Total chlorine less than <50 ppm.

BREAK-DOWN: BIG-FOOT slurry can be chemically broken down using NEUTRALIZER[®]. This dry breaker when added into a slurry mixed with BIG-FOOT polymer at a dosage of 15 lb/3,500 gal will reduce the viscosity of the slurry preparing for disposal.

PACKAGING: BIG-FOOT dry polymer is packaged in 55 lb (25 kg) poly bags, 30 per pallet, and 35 lb (15.88 kg) plastic pails, 36 per pallet.

AVAILABILITY: BIG-FOOT dry polymer can be purchased through any MATRIX Construction Products Distributor. To place an order contact MATRIX Construction Products.

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