BH 20 Grout

ECONOMIC HIGH YIELD GROUTING PRODUCT

GENERAL INFORMATION:

A 20% solids, modified bentonite grout product which has been designed to be mixed with fresh water and pumped to its destination. **BH 20 Grout** requires no polymer additives and is a complete mineral base product. This product is certified by National Sanitation Foundation International to ANSI/NSF Standard 60, Drinking Water Treatment Chemicals - Health Effects. **BH 20 Grout** meets all minimum state regulations for grouting materials.

Once placed, **BH 20 Grout** will set into a semi-rigid plug. **BH 20 Grout** is also suitable for sealing well casings, decommissioning abandoned wells and Geothermal Heat Pump applications where thermal performance is not an issue.

PHYSICAL SPECIFICATIONS:

Thermal Conductivity	**0.40**	Btu/hr ft °F
Permeability	**< 1 x 10^{-7}**	cm/s
Percent Solids	**20**	%
Grout Weight	**9.4**	lb/gal
Linear Shrinkage Potential	**49**	%
Maximum Particle Size	**< 212**	µm
Unit Yield Range	**26.7**	gal/unit

NSF
Certified to NSF/ANSI 60

PACKAGING INFORMATION:

BH 20 Grout is packaged in 50 pound multi-wall polylined paper bags (one unit) and is shipped, stretch-wrapped on wooden pallets. Each full pallet contains 54 bags.

MIXING INSTRUCTIONS:

1. Place 24 gallons of fresh water (per 50 lb Unit) in a conventional paddle or jet mixing tank.
2. Start mixer and add one bag of **BH 20 Grout**. Mix for about 1 minute.
3. Pump through a 1" or 1-1/4" inside diameter tremie pipe at a rate of 10 to 25 gallons per minute.

To obtain the following solids content, follow the instructions above substituting the gallons of fresh water as shown in the table below:

Solids Content	Fresh Water Required	Unit Yield
25%	18.0 gallons	20.7 gal/50# Bag
24%	19.0 gallons	21.7 gal/50# Bag
23%	20.1 gallons	22.8 gal/50# Bag
22%	21.3 gallons	24.0 gal/50# Bag
21%	22.6 gallons	25.3 gal/50# Bag
20%	24.0 gallons	26.7 gal/50# Bag

PURCHASING INFORMATION:

For additional information, contact:

The ORIGINAL Developer of Thermally-Enhanced Grouts

GeoPro, Inc.

Phone: (877) 580-9348 • Fax: (877) 390-1851 • www.GeoProInc.com

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BH 20 Grout

Nominal Borehole Size (in)	U-Bend Pipe Size* Nominal O.D. (in)	Actual O.D. (in)	Gal / Lin Ft with Single U-Bend (2 Pipes)	Units / 100' of Bore (@ 20% Solids)
4.50	3/4	1.050	0.7362	2.76
	1	1.315	0.6851	2.57
	1 1/4	1.660	0.6013	2.25
	1 1/2	1.900	0.5316	1.99
4.75	3/4	1.050	0.8306	3.11
	1	1.315	0.7794	2.92
	1 1/4	1.660	0.6957	2.61
	1 1/2	1.900	0.6260	2.34
5.00	3/4	1.050	0.9300	3.48
	1	**1.315**	**0.8789**	**3.29**
	1 1/4	1.660	0.7951	2.98
	1 1/2	1.900	0.7254	2.72
5.25	3/4	1.050	1.0346	3.87
	1	1.315	0.9834	3.68
	1 1/4	1.660	0.8997	3.37
	1 1/2	1.900	0.8300	3.11
5.50	3/4	1.050	1.1442	4.29
	1	1.315	1.0931	4.09
	1 1/4	1.660	1.0093	3.78
	1 1/2	1.900	0.9396	3.52
5.75	3/4	1.050	1.2590	4.72
	1	1.315	1.2078	4.52
	1 1/4	1.660	1.1241	4.21
	1 1/2	1.900	1.0544	3.95
6.00	3/4	1.050	1.3788	5.16
	1	1.315	1.3277	4.97
	1 1/4	1.660	1.2439	4.66
	1 1/2	1.900	1.1742	4.40

NOTE (U-Bend Pipe Size*): Pipe Sizes based on ASTM D-3035 and ASTM D-2447 (Polyethylene, IPS-OD)

How to Use this Table:

Example: 150 bores which are 250' deep with a 5.00" diameter and a 1" u-bend assembly installed.

1) Find the bore diameter on the left side of the table (**5.00"**).
2) Next, find the "Nominal Pipe Size" in the next column (**1"**).
3) Looking across this row, you will find that these bores will require **0.8789** gallons of grout per linear foot.
4) Calculate the total units of **BH 20 Grout** required for each bore. **3.29** (from the far right column) x 2.5 (250' deep / 100) = 8.23 units per bore.
5) Calculate the total units of **BH 20 Grout** required for the entire project. 8.23 (from step 4 above) x 150 (total number of bores) = 1,235 total units required.
6) Calculate the number of pallets to order. 1,235 (from step 5 above) / 54 (units per pallet - see front of brochure) = 23 pallets of **BH 20 Grout** will need to be ordered.

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