



# BAROID MAX-YIELD™ HP

Low Solids Geothermal Grout



**Description** MAX-YIELD™ HP, low solids geothermal grout, is a bentonite based grout designed for use in the grouting of boreholes containing ground source heat loops, and related applications. MAX-YIELD HP low solids geothermal grout is designed to be combined with MAX-YIELD™ TCM, thermally conductive media, at various water concentrations to yield a grout with a resultant thermal conductivity ranging from 1.0 to 1.2 BTU/ft·hr·°F (1.73 – 2.08 watts/m·°C)

**Applications/Functions**

- MAX-YIELD HP, low solids geothermal grout, provides a stable grout with low permeability and an effective medium for incorporation and suspension of thermally conductive material to enhance subsurface heat transfer of ground source heat loops.

**Advantages**

- Uses approximately half the amount of grout than traditional applications
- Reduced on-site material footprint and handling requirements
- Helps minimize overall logistics and operational costs
- Meets and exceeds industry standard for hydraulic conductivity of  $< 1 \times 10^{-7}$  cm/sec
- Produces a uniform slurry for smooth and efficient pumping

**Typical Properties**

- Appearance: Grey to tan powder
- Specific Gravity: 2.6
- Permeability:  $< 1.0 \times 10^{-7}$  cm/sec

**Recommended Treatment** The recommended treatment is based on the desired thermal conductivity or k value. Please refer to treatment table below.

k BTU/hr·ft·°F	MAX-YIELD HP Low Solids Geothermal Grout (# of 50-lb sacks)	MAX-YIELD TCM Thermally Conductive Media (# of 36-lb sacks)	Water (US gal)	Slurry Volume Yield (US gal)	Total Solids (by weight)
1.0	1	1	38.5	42.7	21.1%
1.2	1	1	36.0	40.2	22.3%

**Packaging** MAX-YIELD HP, low solids geothermal grout, is packaged in 50-lb (22.7-kg) multiwall paper bags.

**Additional Information**

- The grouting material and method selected will depend upon the specific subsurface environment including all prevailing geological and hydrological factors and any existing regulatory requirements. The grouting process may not be complete until the grout is static at the desired level.
- The use of a bentonite-based solution may not be appropriate in unsaturated geologic conditions or environments where the formation water chemistry has a total hardness greater than 500 parts per million and/or a chloride content of greater than 1500 parts per million.
- If questions arise regarding subsurface environments it is always best to consult your local Baroid IDP representative to determine if the Baroid product of choice is appropriate for the given conditions