



POWERTEC^x

thermal enhancement compound

PHYSICAL SPECIFICATIONS

Color	Silvery Black
Texture	Fine/Medium Particles
Bag Weight	15lb
Bags Per Pallet	70
Pallets Per Truckload (typical)	28

(877) 580-9348
www.geoproinc.com



Certified to
NSF/ANSI 60

PowerTEC^x is an engineered alternative to silica sand specifically formulated to be mixed with Thermal Grout Lite or Thermal Grout Select. PowerTEC^x is well suited for any thermally enhanced grouting application and offers increased thermal conductivity ranges, lower mixed viscosities, reduced formation losses, decreased grout weight, and less material required at the job site when compared to traditional silica sand mixes.

HOW TO MIX

- 1 Fill conventional paddle mixer with required volume of Fresh Water (according to GeoPro's Mix Table).
- 2 Start mixer and add required amount of PowerTEC^x.
- 3 Immediately add number of bags of Thermal Grout and mix for approximately 2-3 minutes.
- 4 If specified, slowly add required weight of Silica Compound. Continue to mix until a consistent mixture is obtained (approximately 1-2 minutes).

PUMPING

Pump using a positive displacement pump (piston pump is recommended) through a 1¼" nominal tremie pipe at a rate of 5 to 15 gallons per minute.

WARNING:

PowerTEC^x mixes are extremely sensitive to mix water volumes. GeoPro highly recommends the use of an accurate water meter.

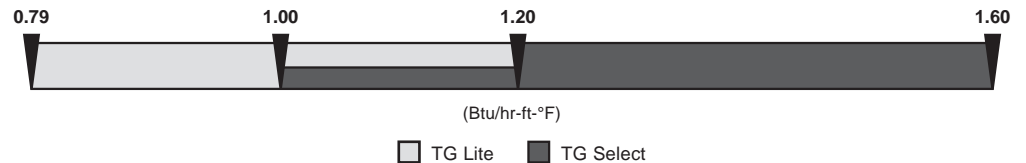
Mix water should be between 50°F and 80°F.

CUSTOM MIX SOLUTIONS

GeoPro specifically engineers a custom mix solution for each PowerTEC^x project that balances the desired material properties with the lowest delivered cost. When mixed and installed according to GeoPro's recipe and instruction, the final grouting material will achieve specified conductivity and will have a permeability of less than 1×10^{-7} cm/s.

Contact (877) 580-9348 to discuss your project requirements with our engineering team.

TARGET THERMAL CONDUCTIVITY RANGE



WARNING: Certifications and support apply only when mixed with GeoPro approved products.

BENEFITS OF POWERTEC^x

PowerTEC^x mixed with TG Lite or TG Select has been field proven to be easier to handle, mix and pump typically reducing formation losses, labor costs and freight when compared to traditional silica sand recipes.

- ⊕ Reduces or eliminates the need for sand additives.
- ⊕ Non-abrasive and self-lubricating when used without sand.
- ⊕ Extends the life of grouting equipment due to low-viscosity & self-lubricating nature.
- ⊕ Reduces total weight of dry materials by 62% - 72% depending on the target thermal conductivity of the mix.
- ⊕ Eliminates 95% of thermal enhancement additive needed to achieve the target thermal conductivity as compared to silica sand.
- ⊕ Significantly reduces freight requirements for dry materials.
- ⊕ Lowers labor costs associated with mixing and pumping thermally-enhanced grouts.
- ⊕ Decreases on-site material storage requirements.
- ⊕ Makes deeper bores possible by reducing total grout weight by 21% to 31% depending on the target thermal conductivity of the mix.
- ⊕ Capable of thermal conductivities as high as 1.60 Btu/hr ft °F with TG Select.
- ⊕ Makes a 1.20 Btu/hr ft °F mix possible when using TG Lite.
- ⊕ NSF/ANSI Standard 60 listings when used with GeoPro's Thermal Grout products.
- ⊕ Independently tested and confirmed to meet permeability requirements. When mixed to specification.

WHEN TO CHOOSE POWERTEC^x

PowerTEC^x is ideally suited for any geothermal application. Residential, light commercial and commercial projects can all benefit from the decreased dry material requirements and improved handling characteristics of PowerTEC^x mixes over traditional silica sand.

Recipes for specific thermal conductivities using PowerTEC^x are optimized by project to ensure the lowest delivered cost. **Contact GeoPro's engineering team to discuss your project requirements.**



(877) 580-9348 or email sales@geoproinc.com

GEOPRO, INC.

GeoPro is a leading expert in the geothermal heating and cooling industry. We paved the way for thermal grout and now we provide grouting products designed to improve the performance and decrease the initial cost of each and every GSHP system.

TESTING

GeoPro will provide free thermal conductivity analysis to any customer. Simply request a testing kit and we will send you three sample containers to be used on multiple batches throughout the duration of your installation. Fill a container and return it to us in the provided box.

Our blind testing procedure is designed so that we don't know what thermal conductivity value you are targeting. We perform our analysis and send back a report of the thermal conductivity your mix actually achieved.

Test results are guaranteed within 3 business days of delivery to our testing facility. If your targeted thermal conductivity is not met, our expert staff will help you to identify the reason and present you with a solution to keep your project on track.



PowerTEC^x is available in 15lb bags shipped on pallets of 70 bags each. A typical truckload consists of 28 pallets or 1,960 bags of PowerTEC^x.

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