

TG Select | Silica Sand | 0.45 Btu/hr-ft-°F

PRODUCT SUBMITTAL INFORMATION

PRODUCT MANUFACTURER & DESCRIPTION

TG Select is manufactured, distributed and supported by GeoPro, Inc.

When supplied by GeoPro and mixed according to our specifications, this TG Select and Silica Sand recipe will yield a bentonite-based thermal grout that provides an environmental seal in the bore annulus with the engineering properties described.

PRODUCT PERFORMANCE & TECHNICAL DATA

This product complies with IGSHA's Closed-Loop Design and Installation Standards which require:

- Permeability less than 1.0×10^{-7} cm/s per ASTM D-5084
- Thermal conductivity tested per ASTM D-5334
- Compliance with NSF/ANSI Standard 60 requirements for purity and suitability for contact with drinking water.

Properties and associated certifications are independently verified by a third party laboratory. Copies of independent test reports are available upon request.

FIELD QUALITY CONTROL

When using TG Select with Silica Sand, GeoPro strongly recommends a field quality control process consisting of:

- Thermal conductivity testing of grout samples
- Submission of material usage reports

Grout samples should be collected in the field and tested in a lab (per ASTM D-5334) to verify that the product meets minimum thermal performance requirements. Thermal conductivity testing is a free service that GeoPro provides. Sample containers are available upon request.

Material usage reports are available for download on our website. Contact us for more information.

BATCH RECIPE

TG Select	1	bag
Silica Sand	0.0	lb
Fresh Water*	14.0	gal
Yield	16.7	gal

*Mix water must be suitable for human consumption

GROUT PROPERTIES

Target Thermal Conductivity	0.45	Btu/hr-ft-°F
Permeability	$<1 \times 10^{-7}$	cm/s
Density	10.0	lb/gal
Percent Solids	30.0	by weight
Percent Active Solids	30.0	by weight

MIXING INSTRUCTIONS

1. Fill conventional paddle mixer with 14.0 gal of fresh water (according to mix table). *Accurate mix water volume measurements are critical.*
2. Start mixer and add 1 bag of TG Select and mix for 1 minute.
3. Slowly add 0.0 lb of Silica Sand over a period of 1-2 minutes. Mix until uniform (approx. 2-3 minutes).
4. Pump with a positive displacement pump (piston pump recommended) through a 1-¼ in tremie pipe.

PACKAGING INFORMATION

TG Select is packaged in 50 lb bags with 54 bags per heat shrunk pallet.

Silica Sand packaging varies.

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