



# TECHNICAL INFORMATION



## THERM-EX GROUT™

**Description:** THERM-EX GROUT™ is a specially engineered system for use as a backfill material in earth coupled heat pump systems.

<b>Typical Characteristics:</b>	<b>Bulk Density (lbs./ft<sup>3</sup>):</b>	58 ± 4
	<b>Cation Exchange Capacity (CEC meq(100gm):</b>	70 – 90
	<b>Color:</b>	Light Grey to Tan
	<b>Moisture Content (%):</b>	5 – 9
	<b>Permeability (cm/sec):</b>	1 X 10 <sup>-8</sup>
	<b>pH:</b>	8.9 ± 0.9
	<b>Sieve Analysis (% Passing #200 Sieve):</b>	>79
	<b>Specific Gravity:</b>	2.55 ± 0.1
	<b>Surface Area (m<sup>2</sup>/gm):</b>	External Surface – 82 All Surfaces - 800
	<b>Thermal Conductivity (Btu/hr-ft-°F):</b>	0.93 – 1.2
	<b>Wet Screen Analysis (Residue on #200 Sieve):</b>	3.0 ± 0.5

Typical Chemical Analysis:	%
SiO <sub>2</sub>	60.34
Al <sub>2</sub> O <sub>3</sub>	19.28
Fe <sub>2</sub> O <sub>3</sub>	3.48
Na <sub>2</sub> O	2.34
TiO <sub>2</sub>	.22
CaO	.38
MgO	1.67
K <sub>2</sub> O	.10
H <sub>2</sub> O	7.75
Other	.07
L.O.I.	4.37

E.P.A Toxicity Analysis:	E.P.A Standard (ppm)	Typical Analysis (ppm)
Arsenic	5.0	<0.1
Barium	100.0	0.5
Cadmium	1.0	<0.05
Chromium	5.0	<0.1
Lead	5.0	<0.1
Mercury	0.2	<0.02
Selenium	1.0	<0.05
Silver	5.0	<0.1

Rev 10/23