



## e<sup>-</sup> GROUT™

Pumpable Medium for Electrical Grounding Applications

e<sup>-</sup> GROUT™ provides a durable, very low resistivity, low permeability backfill material for electrical grounding installations. Its pumpable and flowable consistency ensures complete fill in grounding rod holes or grounding grid trenches. This ensures secure electrical continuity between the entire surface of the grounding medium and the earth. After placement, e<sup>-</sup> GROUT™ assumes a caulk-like consistency having a hydraulic conductivity of  $1 \times 10^{-9}$  cm/sec or lower with electrical resistance values less than 80 ohm/cm

### MATERIAL SPECIFICATIONS:

#### Dry Product

Dry Fineness: 78% passing a 200 mesh screen  
Processed Bulk Density: 58.0 ± 4 pounds/cubic foot

#### Prepared Grout (30% solids unless indicated)

pH (5% solids slurry): 8 to 10.5  
Specific Gravity: 10.2 pounds/gallon  
Hydraulic Conductivity:  $<1 \times 10^{-9}$  cm/sec.  
**Electrical Resistivity: <80 ohm cm.**

When used in electrical grounding applications, e<sup>-</sup> GROUT™ can be mixed using paddle type mixers and placed using positive displacement pumps and plastic tremie lines.

Optimum electrical conductivity is achieved at a ratio of one 50 pound bag of e<sup>-</sup> GROUT™ to 14 gallons of water (30% solids). This mixing ratio is recommended for all grounding applications. The use of grout mixtures having lower solids concentration will result in higher resistivity values.

As e<sup>-</sup> GROUT™ is added to the make-up water, a "pancake batter"-like consistency is produced. After a few minutes of additional mixing the grout will have a smooth consistency. Pumping can take place at any time during the mixing process. During pumping the tremie line should slowly be withdrawn from the hole keeping the end of the line below the surface of the grout column. This reduces pump pressure and minimizes unnecessary grout migration into the formation.

TYPICAL E. P. TOXICITY ANALYSIS		
	Standard (ppm)	Set Grout(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

TYPICAL CHEMICAL ANALYSIS %			
SiO <sub>2</sub>	61.1	MgO	1.70
Al <sub>2</sub> O <sub>3</sub>	17.1	CaO <sub>3</sub>	1.38
Fe <sub>2</sub> O <sub>3</sub>	3.50	TiO <sub>2</sub>	0.20
K <sub>2</sub> O	0.10	Na <sub>2</sub> O	3.82
MnO	0.10	H <sub>2</sub> O	4.50
L.O.I. *	4.37		
*Loss on Ignition			

**e<sup>-</sup> GROUT™ is packaged in 50 pound bags.**

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Foreign Patents also apply