

## PERMEABILITY AND PARTICLE SIZE TESTING OF CETCO PM 199 ORGANOCCLAY

CETCO PM199 organoclay is a 100% organoclay adsorptive media. Particle size distribution and hydraulic conductivity testing was performed on bulk PM199 organoclay by an independent laboratory, PTS Laboratories, Inc., Santa Fe Springs, CA.

### Particle Size Distribution

The typical particle size distribution (PSD) for organoclay (PM199) is listed in the chart below. The PSD data met these typical values.

**Table 1. Particle Size Distribution**

	Sieve (US standard)	mm	% Retained
PM-199	18 mesh	1.00	1% Max
	40 mesh	0.425	70% Min
	50 mesh	0.30	25% Max
	100 mesh	0.15	3% Max
	pan		1% Max

### Hydraulic Conductivity

Hydraulic conductivity testing was performed on virgin PM199 organoclay with distilled water per ASTM D5084 at two confining pressures, 5 psi and 25 psi. Results are shown in Table 2. PM199 organoclay hydraulic conductivity was  $1.0 \times 10^{-2}$  cm/sec at 5 psi and  $5.1 \times 10^{-3}$  cm/sec at 25 psi.

A decrease in permeability over time should be expected as the media adsorbs organic contaminants. This is dependent on the contaminants of concern, concentrations and the flow rate. For PRB walls and similar applications, PM199 organoclay can be mixed with sand, pea gravel or other inert material to help maintain hydraulic properties (see TR-821).

**Table 2. Hydraulic Conductivity Test Results**

	Confining Stress (psi)	Hydraulic conductivity (cm/s)
PM-199	5	$1.0 \times 10^{-2}$
PM-199	25	$5.1 \times 10^{-3}$