UNDERSTANDING THE CETCO GCL CERTIFIED PROPERTY SHEETS

The CETCO GCL certified property sheets include new ASTM test methods:

- ASTM D 6496 "Standard Test Method for Determining Average Bonding Peel Strength Between the Top and Bottom Layers of Needle-Punched Geosynthetic Clay Liners".

- ASTM D 6768 "Standard Test Method for Tensile Strength of Geosynthetic Clay Liners".

These methods, which were developed specifically for GCLs, take the place of ASTM D 4632, a pre-existing geotextile test method that had been used historically to test GCL peel and tensile strength.

The ASTM D 6496 standard for peel strength utilizes 4-inch wide grips to test 4-inch wide GCL specimens with computer data acquisition to average numerous data points during separation. This reports the ***average*** peel strength in units of lbs/in in contrast to the previous standard for peel strength, ASTM D 4632 modified, which reports ***peak*** peel strength in units of pounds force. Comparison testing performed at CETCO's GAI-accredited laboratories demonstrates that a GCL peak peel strength value of 15 pounds per ASTM D 4632 (modified with 4-inch grips) is approximately the same as an average GCL peel strength of 2.5 lbs/in per ASTM D 6496.

ASTM D 6768 for determining the tensile strength of GCLs also utilizes a 4-inch wide grip to test 4-inch wide GCL specimens. GCL tensile strength values are also reported in units of lbs/in. Comparison testing performed at CETCO's GAI-accredited laboratories demonstrates that a GCL tensile strength value 90 pounds per ASTM D 4632 (modified with 4-inch grips) is equivalent to an average GCL tensile strength of 22.5 lbs/in per ASTM D 6496.

Certified property sheets for CETCO GCLs no longer include values for peel strength and grab strength per ASTM D 4632. For several years, CETCO has been publishing both the old and new test methods in our GCL certified properties sheets. This is an unnecessary and confusing redundancy, and so we are taking the final transitional step which eliminates reference to the old test methods.

REFERENCES

ASTM D4632-96, *Standard Test Method for Grab Breaking Load and Elongation of Geotextiles,* Vol. 04.09, ASTM International, W. Conshohocken, PA.

ASTM 6496-99, *Standard Test Method for Determining Average Bonding Peel Strength between the Top and Bottom Layers of Needle-punched GCLs,* Vol. 04.09, ASTM International, W. Conshohocken, PA.

ASTM 6768-02, *Standard Test Method for tensile strength of GCLs,* Vol. 04.09, ASTM International, W. Conshohocken, PA.

800.527.9948 Fax 847.851.1899