



SKAPS INDUSTRIES

TECHNICAL NOTE: **MULLEN BURST PUNCTURE STRENGTH**



This technical note addresses few changes for testing geotextile products: ASTM D3786, “Standard Test Method for Bursting Strength of Textile Fabrics—Diaphragm Bursting Strength Tester Method” and ASTM D4833, “Standard Test Method for Index Puncture Resistance of Geomembranes and Related Products”.

Geosynthetic industry realized these two methods did not provided actual prediction of performance. It was also noticed that minor changes to the geotextile such as thickness resulted in significant variation in testing values, which was irrelevant in actual field performance.

To eliminate the high degree of variability, ASTM D3786 and the geotextile puncture test portion of ASTM D4833 has been removed. ASTM D4833 test method is currently used for testing Geomembranes only.

ASTM D6241, “Standard Test Method for Static Puncture Strength of Geotextiles and Geotextile-Related Products Using a 50-mm Probe” determining the puncture strength of geotextiles is to be used by the industry as an index of puncture strength. The use of this test method is to establish an index value by providing standard criteria and a basis for uniform reporting. This test method is an index test used to measure the force required to puncture a geotextile and geotextile-related products. The relatively large size of the plunger provides a multidirectional force on the geotextile.

CONCLUSION:

Both ASTM D3786 and ASTM D4833 are no longer relevant testing methods for geotextile and no longer recognized by ASTM D35 committee and AASHTO M288. ASTM D6241 is the standard Manufacture Quality Control (MQC) test method for determining CBR Puncture Strength of geotextile.

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