TenCate™ and AASHTO M288-06

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The use of geotextiles in transportation applications has dramatically increased over the past several decades. As a result, a variety of specifications and subsequent products were developed to meet the ever-increasing needs of Federal, State, and Local governmental organizations. This has resulted in greater acceptance of geotextiles, but has also created vast confusion concerning the important and relevant properties associated with specifying geotextiles in general transportation applications.

As a result, a joint committee was formed from the American Association of State Highway and Transportation Officials (AASHTO) and the Industrial Fabrics Association International (IFAI) to revise and improve the current standards and develop a platform that could be used to standardize geotextiles for general transportation applications. The original result of this effort was the "Standard Specifications for Geotextiles," AASHTO M288-06. The current revision for this standard is AASHTO M288-06.

Selection Criteria

AASHTO M288-06 addresses the following applications: Subsurface Drainage, Stabilization, Separation, Permanent Erosion Control, Sediment Control, and Paving Fabrics. The user of the specification must be cautioned that AASHTO M288-06 is not a design guideline. Instead, the selection criteria are based on an engineer's knowledge of the site-specific installation stresses and soil hydraulic properties for the project application. If installation stresses are not known, AASHTO M288-06 has recommended "Survivability Default Classes" to assist an engineer in selection of the appropriate product properties.

AASHTO M288-06 categorizes the survivability of the geotextile into one of three different classes based on the harshness of the installation conditions: Class 1 being the most severe and Class 3 being the least severe. The potential survivability of the geotextile within each class is determined by a standard set of properties generated from ASTM test methods. These properties are Grab Tensile Strength, Trapezoidal Tear Strength, CBR Puncture Strength, and Ultraviolet Stability. Paving Fabrics incorporate the addition of Mass per Unit Area, Asphalt Retention, and Melting Point as survivability criteria.

In addition, for selected applications, a group of hydraulic properties is included based on the site soil conditions (i.e., % fines). These properties are Permittivity and Apparent Opening Size.

Conclusion

The result of this type of specification is several selection criteria that are based on site-specific conditions. This should result in more care when specifying appropriate geotextiles for common transportation applications. In addition, a standard specification should allow geotextile manufacturer's to produce products more efficiently and in a timelier manner.

The following table summarizes the different AASHTO M288-06 categories and the appropriate TenCate™ product. For further information on TenCate™ Geosynthetics and AASHTO M288-06 contact your local TenCate™ Representative or call (800) 685-9990. To order a copy of the complete AASHTO M288-06 specification, contact AASHTO at (202) 624-5800.

AASHTO M288-06 Selection Guide

	AASHTO M288-05 Survivability Class					
	CLASS 1		***CLASS 2***		***CLASS 3***	
Application	**Woven**	**Nonwoven**	**Woven**	**Nonwoven**	**Woven**	**Nonwoven**
	(elongation < 50%)	(elongation > 50%)	(elongation < 50%)	(elongation > 50%)	(elongation < 50%)	(elongation > 50%)
Subsurface Drainage						
% Fines						
< 15%	FW404	180N	**FW404**	**160N**	FW404	140N
15% to 50%	N/A	180N	**FW700**	**160N**	FW700	140N
> 50%	N/A	180N	**FW700**	**160N**	FW700	140N
Stabilization	**600X**	**180N**	600X	160N	500X	140N
Separation	600X	180N	**600X**	**160N**	500X	140N
Permanent Erosion Control						
% Fines						
< 15%	FW404	**180N**	**FW404**	160N	FW404	140N
15% to 50%	N/A	**180N**	**FW700**	160N	FW700	140N
> 50%	N/A	**180N**	**FW700**	160N	FW700	140N

NOTE: AASHTO M288-06 Default Survivability Class listed in ***BOLD*** above for each application.

Sediment Control Fabrics	**Supported Silt Fence**		**Self Supported**	
	Woven	**Nonwoven**	**Woven**	**Nonwoven**
	N/A	140NL	(Elongation < 50%)	(Elongation > 50%)
			N/A	150N

Paving Fabrics	MPV500

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