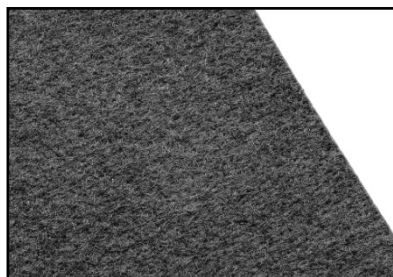




FX[®]-HS Nonwoven Polypropylene Geotextiles

FILTRATION | DRAINAGE | SEPARATION

CARTHAGE MILLS' FX-HS SERIES OF NONWOVEN POLYPROPYLENE GEOTEXTILES



■ SERIES DESCRIPTION

Carthage Mills' FX-HS Series of nonwoven geotextiles are often times considered 'multipurpose' geotextiles as they can offer immediate and cost effective solutions for many separation, drainage, erosion control and filtration applications.

Carthage Mills' FX-HS Series of nonwoven geotextiles are constructed of 100% polypropylene staple filaments that have been needle-punched and heat-set for stability. Weights range from 3 to more than 30 ounces per square yard.

Carthage Mills' FX-HS Series of nonwoven geotextiles exhibits high durability with excellent resistance to puncture and tear, yet easily conforms to the ground and site irreg-

ularities for trouble-free installation.

■ FEATURES AND BENEFITS

The Carthage Mills' FX-HS Series of nonwoven polypropylene geotextiles are designed to provide cost-saving solutions with most soil types in a wide range of applications and varying site conditions.

- SEPARATION and SOIL RETENTION
With superior soil-retention the HS Series prevents dissimilar materials from inter-mixing thereby extending the system life and performance of most drainage/filtration applications.
- FILTRATION AND HIGH PERMITTIVITY
Excellent soil retention and high permittivity properties provide high water flow rates with most soil types.
- STRENGTH AND DURABILITY
Provides excellent resistance to installation damage and adverse site conditions.
- MULTI-PURPOSE VERSATILITY
Combining the HS Series' features of Separation, Soil Retention, High Permittivity, and excellent Durability, the HS Series provides cost-effective solutions in a wide range of applications.

■ APPLICATIONS

Carthage Mills' FX-HS Series of nonwoven geotextiles can be used in a multitude of applications.

- LIGHTWEIGHT nonwovens are primarily used in Subsurface Drainage applications or systems along highways, under airfields and athletic fields, in segmental retaining walls (SRW) and within embankments.
- MEDIUM TO HEAVYWEIGHT nonwovens are typically used as a Separator under roadways, airport runways, access/haul roads and railroad ballast; under riprap for Slope and Shoreline Protection; Landfill Drainage and Filtration; and Site Dewatering Bags.

AASHTO M288-15 Specification:

- > FX-45HS exceeds the requirements for SUBSURFACE DRAINAGE, SEPARATION and STABILIZATION / Class 3.
- > FX-60HS exceeds the requirements for ALL FOUR APPLICATIONS / Class 2.
- > FX-80HS exceeds the requirements for SEPARATION, STABILIZATION and PERMANENT EROSION CONTROL / Class 1.





■ FX[®]-HS Series of Nonwoven Geotextiles

Carthage Mills' **FX-HS Series** of nonwoven geotextiles are of 100% polypropylene staple fibers which are formed into a random network, needlepunched and heatset for dimensional stability. The **FX-HS Series** of nonwoven geotextiles delivers high durability; excellent physical and hydraulic properties; is inert to biological degradation; and resistant to naturally encountered chemicals, alkalis, and acids.

PROPERTY	ASTM TEST	UNIT	FX [®] -30HS	FX [®] -35HS	FX [®] -40HS	FX [®] -45HS	FX [®] -60HS	FX [®] -70HS	FX [®] -80HS	FX [®] -100HS	FX [®] -120HS	FX [®] -160HS	
☐ Mechanical													
Grab Tensile Strength	D 4632	lbs	80	90	100	120	160	180	205	250	300	380	
Grab Tensile Elongation		%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	
Trapezoidal Tear	D 4533	lbs	30	40	45	50	60	75	80	100	115	140	
CBR Puncture	D 6241		175	250	300	335	410	450	500	625	800	1025	
☐ Endurance													
UV Resistance	D 4355	% @ 500 hrs	70%	70%	70%	70%	70%	70%	70%	70%	70%	70%	
☐ Hydraulics/Filtration													
Permittivity	D 4491	sec ⁻¹	2.10	2.00	2.00	1.70	1.50	1.40	1.35	0.80	0.80	0.70	
Water Flow Rate		gpm/ft ²	150	145	140	120	110	100	90	75	65	50	
Apparent Opening Size (AOS)	D 4751	US Std Sieve	50	50	70	70	70	70	80	100	100	100	
☐ Physical													
Mass Per Unit Area (Typical)	D 5261	oz/yd ²	3.0	3.5	4.0	4.5	6.0	7.0	8.0	10.0	12.0	16.0	
Thickness (Typical)	D 5199	mils	31	34	35	38	48	60	64	80	90	115	
Standard Roll Sizes Packaging Weight	Measured (Typical)	ft yd ²	12.5 ft x 360 ft 500 yd ²										
		lbs	120 lbs	120 lbs	142 lbs	150 lbs	231 lbs	250 lbs	266 lbs	324 lbs	383 lbs	511 lbs	
		ft yd ²	15.0 ft x 360 ft 600 yd ²					15.0 ft x 300 ft ⁽¹⁾ 500 yd ²					
		lbs	135 lbs	160 lbs	167 lbs	198 lbs	203 lbs	231 lbs	254 lbs	347 lbs	383 lbs	463 lbs	

NOTES: Mullen Burst Strength ASTM D 3786 is no longer recognized by ASTM D35 on Geosynthetics. Puncture Strength ASTM D 4833 is not recognized by AASHTO M 288-15 and has been replaced with CBR Puncture ASTM D 6241.

- ⁽¹⁾ At the time of manufacturing. Handling, storage and shipping may change these properties.
- Unless otherwise stated, all values stated here are Minimum Average Roll Values (MARV).
 - The properties reported above are effective 12-01-16 and are subject to change without notice.

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