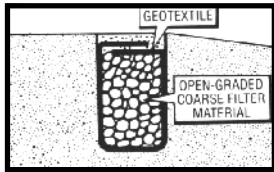


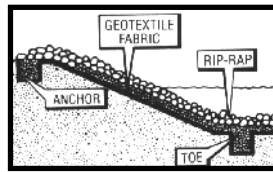
Drainage / Filtration / Separation

■ Nonwoven “HS” Series Geotextiles

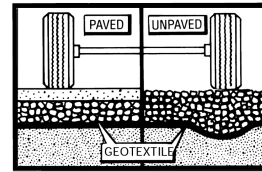
The FX™-HS Series of nonwoven geotextiles – often times considered ‘*multipurpose*’ – offers solutions for many drainage, erosion control and filtration applications. The ‘HS’ Series is constructed of 100% polypropylene staple filaments that have been needlepunched and heat set. Weights can be produced from 3 to 30 ounces per square yard.



Subsurface Drainage



Erosion Control



Separation

□ **FX™-30HS thru FX™-45HS** – These lightweight fabrics are typically used in underdrain systems to prevent soils from entering the drainage system. They can also be used as a separator under pavers and driveways.

□ **FX™-60HS thru FX™-80HS** – These medium weight fabrics are typically used under riprap to limit the loss of fines in slope and *non-critical* shoreline applications, or when site-specific soil samples reveal well-graded particle conditions. They can also be used as separators under parking lots and roadways.

□ **FX™-100HS thru FX™-160HS** – These heavy weight fabrics are typically used as separators under roadways and railroad ballast, under shoreline riprap in *non-critical* applications, and as protective cushions under impermeable liners.

(Partial Listing)

PROPERTY	ASTM METHOD	UNITS	FX™-30HS	FX™-35HS	FX™-40HS	FX™-60HS	FX™-70HS	FX™-80HS	FX™-100HS
□ Mechanical									
Grab Tensile	D 4632	lbs	80	95	115	160	180	205	250
Grab Tensile Elongation		%	50%	50%	50%	50%	50%	50%	50%
Wide Width Tensile	D 4595	lbs/in	30	35	40	60	65	75	100
Mullen Burst	D 3786	psi	150	185	210	280	330	350	460
Puncture	D 4833	lbs	50	55	65	85	100	110	150
Trapezoidal Tear	D 4533	lbs	30	40	50	60	75	85	100
□ Endurance									
UV Resistance	D 4355	%	70%	70%	70%	70%	70%	70%	70%
□ Hydraulics / Filtration									
Apparent Opening Size	D 4751	US Sieve	70	70	70	70	70	80	100
Percent Open Area	CW-02215 ¹	%	0%	0%	0%	0%	0%	0%	0%
Permittivity	D 4491	sec ⁻¹	2.00	2.00	3.00	1.30	1.50	1.50	1.20
Permeability		cm/sec	0.22	0.25	0.22	0.24	0.34	0.38	0.30
Flow Rate		gpm/ft ²	150	150	140	110	110	110	85
□ Physical									
Mass Per Unit Area	D 5261	oz/yd ²	3.0	3.5	4.0	6.0	7.0	8.0	10.0

¹This is not an ASTM test but rather a USACOE document that describes the test.

□ Please see papers entitled *Why Percent Open Area?* and *Independent Research on Fabric Clogging* included with our information package.

□ The properties reported above are effective 09/18/03 and are subject to change without notice.

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