



## ■ FX® Nonwoven HS(E) Series of Geotextiles

Carthage Mills' Nonwoven HS Series of Geotextiles of 100% polypropylene staple fibers provide filtration for subsurface drainage and separation of soils. The HS Series of geotextiles exhibit high durability and excellent physical and hydraulic properties.

The Carthage Mills FX®-HS(E) series of nonwoven geotextiles designates "Mass Per Unit Area" or "Weight Per Square Yard" as a true Minimum Value.

PROPERTY	METHOD	UNIT	FX®-40HS(E)	FX®-60HS(E)	FX®-70HS(E)	FX®-80HS(E)	FX®-100HS(E)	FX®-120HS(E)	FX®-140HS(E)	FX®-160HS(E)
<input type="checkbox"/> <b>Mechanical</b>										
Grab Tensile Strength	ASTM D 4632	lbs	105	160	200	205	270	310	390	425
Grab Tensile Elongation		%	50%	50%	50%	50%	50%	50%	50%	50%
Mullen Burst	ASTM D 3786	psi	230	315	370	420	500	625	700	800
Trapezoidal Tear	ASTM D 4533	lbs	45	65	75	90	100	120	135	145
Puncture	ASTM D 4833		65	95	115	130	160	180	210	240
CBR Puncture	ASTM D 6241		325	425	525	535	535	830	1000	1200
<input type="checkbox"/> <b>Endurance</b>										
UV Resistance	ASTM D 4355	% @ 500 hrs	70%	70%	70%	70%	70%	70%	70%	70%
<input type="checkbox"/> <b>Hydraulics / Filtration</b>										
Permittivity <sup>(1)</sup>	ASTM D 4491	sec <sup>-1</sup>	2.00	1.63	1.41	1.26	0.94	0.80	0.64	0.50
Water Flow Rate <sup>(1)</sup>		gpm/ft <sup>2</sup>	160	110	110	100	75	60	50	40
Permeability <sup>(1)</sup>		cm/sec	0.55	0.25	0.46	0.25	0.25	0.20	0.25	0.20
Apparent Opening Size (AOS) <sup>(1)</sup>	ASTM D 4751	US Std Sieve	70	70	70	80	100	100	100	100
<input type="checkbox"/> <b>Physical</b>										
Mass Per Unit Area (Minimum)	ASTM D 5261	oz/yd <sup>2</sup>	4.0	6.0	7.0	8.0	10.0	12.0	14.0	16.0
Thickness (Typical)	ASTM D 5199	mils	70	85	90	100	110	120	135	175

<sup>(1)</sup> At the time of manufacturing. Handling, storage and shipping may change these properties.

- All values reported in this table are M.A.R.V. unless otherwise stated. Statistically, these values yield a 97.7% probability that any sample of geogrid tested will exceed the value reported.
- The properties reported above are effective 01/05/09 and subject to change without notice.

Seller makes no warranty, expressed or implied, concerning the product furnished hereunder other than at the time of delivery it shall be of the quality and specification stated herein. Any implied warranty of fitness for a particular purpose is expressly excluded, and, to the extent that it is contrary to the foregoing sentence, any implied warranty of merchantability is expressly excluded. Any recommendations made by seller concerning the uses or applications of said product are believed reliable and seller makes no warranty of results to be obtained. If the product does not meet Carthage Mills current published specifications, and the customer gives notice to Carthage Mills before installing the product, then Carthage Mills will replace the product without charge or refund the purchase price.