

Geotextiles | Erosion Control | Geogrids | Geomembranes

FX®-HSE Nonwoven Polypropylene Geotextiles

FILTRATION | DRAINAGE | SEPARATION | LINER PROTECTION | GAS COLLECTION

CARTHAGE MILLS' FX-HSE SERIES OF NONWOVEN POLYPROPYLENE GEOTEXTILES



SERIES DESCRIPTION

Carthage Mills' FX-HSE Series of nonwoven geotextiles are specially designed for a wide variety of applications in the environmental market. They offer immediate and cost-effective solutions for many of the unique challenges found in these types of applications.

Carthage Mills' FX-HSE Series of nonwoven geotextiles are constructed of 100% polypropylene staple filaments that have been needlepunched and heat-set for stability; and are chemically stable in a wide range of aggressive environments found in and around environmental applications.

Carthage Mills' FX-HSE Series of nonwoven geotextiles exhibits high

durability with excellent resistance to puncture and tear, yet easily con-forms to the ground and site irreg- ularities for trouble-free installation.

Meeting the strictest of Codes and Regulations, the FX-HSE Series of nonwoven geotextiles is manufactured such that the Mass Per Unit Area is reported as true "Minimums"; thereby assuring a thick structure for the long-term protection and performance of structures like impermeable lining systems.

■ FEATURES AND BENEFITS

The Carthage Mills' FX-HSE Series of environmental nonwoven polypropylene geotextiles are designed to provide:

- SEPARATION and SOIL RETENTION With superior soil-retention the FX-HSE Series prevents dissimilar materials from inter-mixing – critical in the collection of liquids in landfill applications.
- FILTRATION AND HIGH PERMITTIVITY High permittivity properties provide high water/leachate flow rates.

- STRENGTH AND DURABILITY Provides excellent resistance to puncture and installation damage, and adverse site conditions; assuring immediate protection of lining systems.
- LATERAL FLOW OF GASES
 Assuring a clog-free outlet for
 gases to escape to and through
 venting systems is critical in the
 long-term success of the landfill.
- CHEMICALLY STABLE IN HARSH CONDITIONS
 Stable within a pH range of 2 to 13.

APPLICATIONS

Carthage Mills' FX-HSE Series of nonwoven geotextiles are most frequently used in applications where minimum standards and codes are prevalent, such as:

- LANDFILL/WASTE COLLECTION DRAINAGE AND FILTRATION SYSTEMS
- GEOMEMBRANE PROTECTION
- GAS COLLECTION AND VENTING SYSTEMS
- LIQUID AND/OR GAS PRESSURE RELIEF SYSTEMS







Carthage Mills 4243 Hunt Road Cincinnati, OH 45242 www.carthagemills.com 513-794-1600 TELEPHONE 800-543-4430 TOLL FREE 513-794-3434 FACSIMILE info@carthagemills.com

Since 1958: America's *First* Geotextile Company



Carthage Mills Series Data

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FX[®]-HSE Series of Nonwoven Geotextiles

Carthage Mills' FX-HSE Series of nonwoven geotextiles is designed specifically for the environmental market, is constructed of 100% polypropylene staple fibers which are formed into a random network, needle-punched and heatset for dimensional stability. The <u>FX®-HSE</u> <u>Series</u> 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.

The Carthage Mills' FX-HSE Series of environmental nonwoven geotextiles designates "Mass Per Unit Area" or "Weight Per Square Yard" as a true Minimum value.

Note: The listing below is a sampling of available products in this Series environmental geotextiles. For more information and/or a complete listing of all the products in this Series, please call or visit our website.

PROPERTY	ASTM TEST	UNIT	FX®-120HSE*	FX-600HSE	FX-800HSE	FX-1000HSE	FX-1200HSE
🗆 Mechanical							222
Grab Tensile Strength	D 4632	lbs	320	170	230	270	320
Grab Tensile Elongation		%	50%	50	50	50	50
Trapezoidal Tear	D 4533 D 6241	lbs	125	70	95	105	125
CBR Puncture			900	450	675	725	900
Endurance							
UV Resistance	D 4355	% @ 500 hrs	70%	80	80	80	80
Hydraulics/Filtration							
Permittivity ⁽¹⁾	D 4491	sec ⁻¹	0.70	1.50	1.40	1.20	.90
Water Flow Rate ⁽¹⁾		gpm/ft ²	50	110	110	85	65
Apparent Opening Size (AOS) (1)	D 4751	US Std Sieve	100	80	80	100	100
🗆 Physical							
Mass Per Unit Area (Minimum)	D 5261	oz/yd²	12.0	6.0	8.0	10.0	12.0
Thickness (Typical)	D 5199	mils	120	80	90	115	130
Standard Roll Sizes / Packaging / Weight			Call for all Roll Sizes, Packaging and Weights				

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 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); are calculated as the Typical minus two standard deviations; and are based on a 97.7% confidence level.

■ The properties reported above are effective 01-01-24 and subject to change without notice.

*NOTE: Please note that the data for FX-120HSE has not been updated since 2020, and will be updated when possible in 2021

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