



# FX<sup>®</sup> High-Strength Polyester (PET) Geotextiles

SEPARATION | REINFORCEMENT | CONFINEMENT

## CARTHAGE FX<sup>®</sup> HIGH-STRENGTH SERIES OF WOVEN POLYESTER (PET) GEOTEXTILES



### ■ SERIES DESCRIPTION

Carthage Mills' FX<sup>®</sup> High-Strength Series of woven polyester (PET) geotextiles were developed for the most demanding applications of reinforcement and confinement.

The FX<sup>®</sup> High-Strength Series (PET) is produced of 100% high-tenacity, high molecular weight, multifilament filament polyester (PET) yarns. They deliver the higher ultimate tensile strength properties, resistance to installation damage, and exceptional creep resistance and soil interaction that results in higher long-term design strengths (LTDS) per GRI-GT7.

Carthage Mills can custom manufacture an FX<sup>®</sup> High-Strength (PET) geotextile to meet individual project specifications up to approximately **55,000 lbs/ft Ultimate**

**Tensile**; in custom roll sizes; and with minimal lead times meeting difficult delivery requirements.

### ■ FEATURES AND BENEFITS

Carthage Mills' FX<sup>®</sup> High-Strength Series of woven polyester (PET) geotextiles are designed to provide cost-saving solutions in a wide range of applications and varying site conditions, making them the logical choice for the most demanding of applications.

- **CREEP RESISTANCE**  
The high-tenacity, high molecular weight, multifilament filament polyester (PET) yarns and weaving process delivers higher long-term design strengths (LTDS).
- **REINFORCEMENT**  
High tensile modulus at low strains and excellent soil interaction delivers immediate support in severe conditions.
- **DURABILITY**  
Superior resistance to installation damage assures long-term performance.
- **HIGH SEAM STRENGTHS**  
Achieve the high seam strengths that are essential in all closure

and confinement applications.

- **CUSTOM MANUFACTURE WITH MINIMAL LEAD TIME**  
Manufactured to 'project specifications' with minimal lead time and on-time delivery.

### ■ APPLICATIONS

The combination of strengths, durability, creep resistance and soil interaction make the Carthage Mills' FX<sup>®</sup> High-Strength Series of woven polyester (PET) geotextiles uniquely versatile in their ability to deliver in:

- Reinforcement for permanent and temporary Mechanically Stabilized Earth (MSE) structures or walls
- Embankments and Dikes on soft soils and foundations
- Voids Bridging in landfills (liner support); Highways and Runways
- Reinforcement in steepened slopes
- Capping/Closures in landfills and other hazardous waste sites
- Geotextile tubes; Containment
- Most any reinforcement application that requires: High Creep Resistance, High Tensile Modulus, Tremendous Durability and Long-Term Design Strength (LTDS)





## ■ FX<sup>®</sup> High-Strength Series (PET) of Woven Geotextiles

Carthage Mills' FX<sup>®</sup> High-Strength Series (PET) of woven geotextiles are composed of high-tenacity, high molecular weight, multifilament polyester (PET) yarns that are woven into a stable network placed under tension, are inert to biological degradation, and resistant to naturally encountered chemicals, alkalis and acids.

PROPERTY	METHOD	UNITS	FX <sup>®</sup> -400PET	FX <sup>®</sup> -600PET	FX <sup>®</sup> -800PET	FX <sup>®</sup> -1200PET	FX <sup>®</sup> -Project Specific
<input type="checkbox"/> <b>Mechanical/Reinforcement</b>							Carthage Mills can custom manufacture FX <sup>®</sup> -PET High-Strength polyester geotextiles to <u>meet individual project specifications</u> up to approximately <b>55,000 lbs/ft Ultimate Tensile Strength</b> ; with minimal lead times meeting difficult delivery requirements.  Call for a <b>Custom Quotation</b> and delivery schedule.  <div style="text-align: center;"><b>Made in the U.S.A.!</b></div>
Tensile Strength @ Ultimate MD	ASTM D 4595	lbs/in lbs/ft	400 4,800	600 7,200	800 9,600	1,200 14,400	
Tensile Strength @ Ultimate XMD			400 4,800	300 3,600	300 3,600	300 3,600	
Tensile Strength @ 5% Strain MD		lbs/ft	2,300	3,035	4,010	5,328	
Tensile Strength @ 5% Strain XMD			2,300	-	-	-	
Creep Reduced Strength	ASTM D 5262		2,980	4,470	5,960	8,944	
Long Term Design Strength - LTDS <sup>(1)</sup>	GRI-GT7		2,317	3,475	4,633	6,950	
<input type="checkbox"/> <b>Hydraulics / Filtration</b>							
Permittivity	ASTM D 4491	sec <sup>-1</sup>	0.5	0.5	0.5	0.5	
Apparent Opening Size (AOS)	ASTM D 4751	US Std Sieve	35	35	35	35	
<input type="checkbox"/> <b>Endurance</b>							
UV Resistance	ASTM D 4355	%	65%				
<input type="checkbox"/> <b>Physical</b>							
Mass Per Unit Area (Typical)	ASTM D 5261	oz/yd <sup>2</sup>	8.8	11.0	13.2	16.0	
Standard Roll Sizes (Typical)	Measured	ft (yd <sup>2</sup> )	15.0 x 300 (500 yd <sup>2</sup> ) Custom sizes also available				

<sup>(1)</sup> Type 3 - Silty Sand

- 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 05/01/11 and subject to change without notice.

$$LTDS = \frac{T_{ULTIMATE}}{RF_{CR} \times RF_{ID} \times RF_D} = \frac{T_{ULTIMATE}}{1.61 \times 1.17 \times 1.10}$$

Partial Reduction Factors: RF<sub>CR</sub> = Creep Deformation  
 RF<sub>ID</sub> = Installation Damage  
 RF<sub>D</sub> = Biological and Chemical Degradation

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.