Carthage Mills | **Series Data**

Geotextiles | Erosion Control | Geogrids | Geomembranes

Carthage %™ Open Area Monofilament Geotextiles

The **Carthage % Open Area Series** of woven monofilament geotextiles are made of high-tenacity, polypropylene yarns which are woven into a stable network such that they retain their relative position. The **Carthage % Open Area Series** of woven monofilament filtration geotextiles is inert to biological degradation and resistant to naturally encountered chemicals, alkalis, and acids.

PROPERTY	METHOD	UNIT	Carthage 6%™ (1)	Carthage 15%™	Carthage 30%™ (1)	Carthage 4%HD™	Carthage 10%HD™	Carthage 12%HD™
☐ **Mechanical**								
Grab Tensile Strength	ASTM D 4632	lbs	370 x 250	365 x 200	350 x 280	400 x 315	425 x 350	400 x 335
Grab Tensile Elongation		%	15%	24% x 10%	30% x 18%	15%	20%	20 x 13%
Wide Width Tensile	ASTM D 4595	lbs/in	NA	NA	NA	NA	NA	NA
Trapezoidal Tear	ASTM D 4533	lbs	100 x 60	115 x 75	100 x 98	150 x 165	145 x 125	145 x 125
CBR Puncture	ASTM D 6241		950	675	870	1,150	1,340	1,250
☐ **Endurance**								
UV Resistance	ASTM D 4355	% @ 500 hrs	90%	90%	90%	90%	90%	90%
☐ **Hydraulics/Filtration**								
Permittivity	ASTM D 4491	sec^{-1}	0.28	2.10	4.0	0.90	0.96	1.50
Water Flow Rate		gpm/ft^2	18	145	300	70	70	115
Percent Open Area	CW-02215	%	**4–6%**	10-15%	**20-30%**	1-4%	6-10%	8-12%
Apparent Opening Size (AOS) (a)	ASTM D 4751	US Std Sieve	**70**	40	**30**	40	40	30
☐ **Physical**								
Standard Roll Sizes	Measured (Typical)	ft	6.0 x 300 / 12.0 x 300	12.0 x 300	12.0 x 300	15.0 x 300	12.5 x 300 / 15 x 300	12.5 x 300 / 15 x 300
Packaging		yd^2	200 / 400	400	400	500	417 / 500	417 / 500
Weight		lbs	85 / 173	175	157	290	245 / 320	228 / 325

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.

a) AOS, typically referred to as a MARV, is actually reported as a MAXIMUM allowable opening when in English US Sieve units; or as the SMALLEST allowable opening when in Metric units (mm).

- Unless otherwise stated, all values stated here are Minimum Average Roll Values (MARV).
- The properties reported above are effective 01-01-2026 and are subject to change without notice.

(1) An independent study – ***Independent Research on Fabric Clogging*** – evaluated the hydraulic performance and clogging potential of the four major types of geotextiles including the three highlighted above, and determined that the combined Hydraulic/ Filtration properties of **Percent Open Area (POA)** and **Apparent Opening Size (AOS)**, proved to be the "most critical" in predicting long-term filtration performance. A companion review – ***Why Percent Open Area?*** – explains the *Role, Function* and *Importance* of Percent Open Area (a property unique to woven monofilaments) in the mechanics of geotextile filtration. Both papers can be viewed by clicking on their links above, or via the home page of the Monofilament Series of the Carthage Mills website at www.carthagemills.com.

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