



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 8%™	Carthage 10%™	Carthage 15%™	Carthage 30%™ (1)	Carthage 4%HD™	Carthage 10%HD™	Carthage 12%HD™
<input type="checkbox"/> Mechanical										
Grab Tensile Strength	ASTM D 4632	lbs	370 x 250	350 x 200	350 x 200	365 x 200	350 x 280	400 x 315	425 x 350	400 x 335
Grab Tensile Elongation		%	15%	15%	15%	24% x 10%	30% x 18%	15%	21%	20 x 15%
Wide Width Tensile	ASTM D 4595	lbs/in	NA	NA	NA	NA	NA	250 x 230	270 x 255	230 x 225
Trapezoidal Tear	ASTM D 4533	lbs	100 x 60	100 x 70	100 x 70	115 x 75	100 x 98	150 x 165	145 x 125	145 x 125
CBR Puncture	ASTM D 6241		950	800	700	675	870	1,150	1,340	1,250
<input type="checkbox"/> Endurance										
UV Resistance	ASTM D 4355	% @ 500 hrs	90%	90%	90%	90%	90%	90%	90%	90%
<input type="checkbox"/> Hydraulics/Filtration										
Permittivity	ASTM D 4491	sec ⁻¹	0.28	0.5	1.5	2.10	4.0	0.90	0.96	1.50
Water Flow Rate		gpm/ft ²	18	60	110	145	300	70	70	115
Percent Open Area	CW-02215	%	4-6%	6-8%	6-10%	10-15%	20-30%	1-4%	6-10%	8-12%
Apparent Opening Size (AOS) (a)	ASTM D 4751	US Std Sieve	70	40	40	40	30	40	40	30
<input type="checkbox"/> Physical										
Standard Roll Sizes Packaging Weight	Measured (Typical)	ft	6.0 x 300	6.0 x 300	6.0 x 300	12.0 x 300	12.0 x 300	15.0 x 300	12.5 x 300	12.5 x 300
		yd ²	200	200	200				417	417
		lbs	85	85	85	400	157	290	245	228
			12.0 x 300	12.0 x 300	12.0 x 300	400	175	15 x 300	15 x 300	15 x 300
			400	400	400	175	500	500	500	500
			173	175	170			320	320	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 01-01-2022 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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