



Carthage 4%HD™

Carthage 4%HD is a woven filtration geotextile made of high-tenacity, monofilament polypropylene yarns which are woven into a stable network such that they retain their relative position. Carthage 4%HD is part of the [Carthage % Open Area Series](#) of woven monofilament filtration geotextiles, is inert to biological degradation and resistant to naturally encountered chemicals, alkalis, and acids.

AASHTO M 288: Carthage 4%HD exceeds the geotextile requirements for Subsurface Drainage/ Classes 2 & 3 (Woven: Percent 'in-situ' soil passing 0.075 mm = <15%) and Permanent Erosion Control /Classes 1 & 2 (Woven: Percent 'in-situ' soil passing 0.075 mm = <15%).

PROPERTY	TEST METHOD	DATA	
		METRIC	ENGLISH
<input type="checkbox"/> Mechanical			
Grab Tensile Strength	ASTM D 4632	1.78 x 1.402 kN	400 x 315 lbs
Grab Tensile Elongation		15%	
Wide Width Tensile Strength	ASTM D 4595	43.78 x 40.28 kN/m	250 x 230 lbs/in 3000 x 2760 lbs/ft
Trapezoidal Tear	ASTM D 4533	0.67 x 0.73 kN	150 x 165 lbs
CBR Puncture	ASTM D 6241	5.12 kN	1150 lbs
<input type="checkbox"/> Endurance			
UV Resistance	ASTM D 4355	90% @ 500 hrs	
<input type="checkbox"/> Hydraulics / Filtration			
Permittivity ⁽¹⁾	ASTM D 4491	0.90 sec ⁻¹	
Water Flow Rate ⁽¹⁾		2851 lpm/m ²	70 gpm/ft ²
Percent Open Area	CW-02215	1-4%	
Apparent Opening Size (AOS) ^{(1) (2)}	ASTM D 4751	0.425 mm	40 US Std. Sieve
<input type="checkbox"/> Physical			
Standard Roll Sizes / Packaging / Weight (Custom fabrication and packaging are available.)	Measured (Typical)	4.57m x 91.44 m 418 m ² 131.5 kg	15.0 ft x 300 ft 500 yd ² 290 lbs

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.

(2) 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.

» [AASHTO M 288: Geotextile Product Selection Guide](#)

Carthage Mills assumes no liability for the accuracy or completeness of this information or for the ultimate use by the purchaser. Carthage Mills disclaims any and all express, implied, or statutory standards, warranties or guarantees, including without limitation any implied warranty as to merchantability or fitness for a particular purpose or arising from a course of dealing or usage of trade as to any equipment, materials, or information furnished herewith. This document should not be construed as engineering advice.