



# EverGuard®

## TPO Fleece-Back Membrane

Physical Properties (ASTM D 6878-21)					
Type	ASTM Test Method	ASTM Minimum Values	EverGuard® TPO Fleece-Back Test Values (approx.)		
			100	115	135
TPO Nominal Thickness	ASTM D 751	0.039"	0.045" (1.14 mm)	0.060" (1.52 mm)	0.080" (2.03 mm)
Thickness Over Scrim	ASTM D 7635	0.015"	15.8 mil (Nominal)	22.1 mil (Nominal)	31.4 mil (Nominal)
Breaking Strength	ASTM D 751 Grab Method MD	220 lbf	375 lbf (559 kg/m) x 330 lbf (492 kg/m)	400 lbf (596 kg/m) x 360 lbf (536 kg/m)	440 lbf (656 kg/m) x 390 lbf (581 kg/m)
Elongation at Break	ASTM D 751	15%	30%	30%	30%
Tear Strength	ASTM D 751 (8" x 8" Sample)	55 lbf	90 lbf (134 kg/m) x 120 lbf (179 kg/m)	70 lbf (104 kg/m) x 130 lbf (194 kg/m)	100 lbf (149 kg/m) x 180 lbf (268 kg/m)
Brittleness Point	ASTM D 2137	-40° F			
Ozone Resistance	ASTM D 1149	No cracks @ 7X magnification	No visible deterioration @ 7X magnification	No visible deterioration @ 7X magnification	No visible deterioration @ 7X magnification
Properties after Heat Aging	ASTM D573	≤1.5% Weight change after 8 weeks @ 275°F, No cracks @ 7X magnification	100%	100%	100%
Linear Dimensional Change	ASTM D 1204	±1%	0.2%	0.4%	0.4%
Water Absorption	ASTM D 471	±3%	0.7%	0.7%	0.7%
Factory Seam Strength (Membrane Failure)	ASTM D 751	66 lbf	115 lbf (171 kg/m)	145 lbf (216 kg/m)	155 lbf (231 kg/m)
Weather Resistance	ASTM G 155	10,080 kJ/m² at 340 nm, No cracks @ 7X magnification	>20,000 KJ/(m².nm) at 340 nm	>25,000 KJ/(m².nm) at 340 nm	>25,000 KJ/(m².nm) at 340 nm

Note 1: 100 mil, 115 mil and 135 mil is comprised of a 45 mil, 60 mil and 80 mil membrane, respectively, with an integral fleece backing.

Note 2: Physical properties are based on 45, 60, or 80 mil membranes.

Note 3: Certain data is provided in MD (machine direction) x CMD (cross machine direction) format.

Note 4: Data is based upon typical product performance and is subject to normal manufacturing tolerance and variance

Additional Physical Properties					
Puncture Resistance	FIM 101C Method 2031	Not Established	>350 lbs (159 kg)	>380 lbs (172 kg)	>380 lbs (172 kg)
Permeance	ASTM E 96	Not Established	<0.08 Perms	<0.08 Perms	<0.08 Perms

Guarantee	
EverGuard® TPO Fleece-Back 100	Up to 20 years
EverGuard® TPO Fleece-Back 115	Up to 25 years
EverGuard® TPO Fleece-Back 135	Up to 30 years

\*Values stated are approximate and subject to normal manufacturing variation. These values are not guaranteed and are provided solely as a guide. GAF warranties and guarantees do not provide coverage against hail or other impact. See applicable guarantee or warranty, available at [gaf.com](http://gaf.com), for complete coverage and restrictions. Hail or puncture resistance coverage may be available for purchase for eligible systems. Contact GAF for more information.

Sustainability Ratings/Certifications							
Cool Roof Rating Council (CRRC)							
Color	Rated Product ID#	Initial			Aged		
		Solar Reflectance (ASTM C 1549)	Thermal Emittance (ASTM C 1371)	Solar Reflectance Index (ASTM E 1980)	Solar Reflectance (ASTM C 1549)	Thermal Emittance (ASTM C 1371)	Solar Reflectance Index (ASTM E 1980)
White	0676-0094	0.83	0.84	104	0.72	0.91	89
LEED Information							
Manufacturing Location		Mount Vernon, IN, New Columbia, PA, Cedar City, UT					





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Applicable Standards/Approvals			
UL Listed to ANSI/UL790 Class A (Refer to UL Product iQ for actual assemblies)	FM Approved (Refer to FM <a href="http://www.RoofNav.com">www.RoofNav.com</a> for actual assemblies)	Meets or exceeds the physical requirements of ASTM D 6878	CRRC Rated - Can be used to comply with 2019 Title 24, Part 6, Cool Roof Requirements of the California Code of Regulations (White only)
	Meets or exceeds the requirements of the Texas Department of Insurance	UL Evaluation Report UL ER1306-01	ICC-ES Evaluation Report ESR-4676 (Cedar City, UT only)

Product Data								
Roll Size	12' Roll Size	12' Roll Weight (Average)	10' Roll Size	10' Roll Weight (Average)	6' Roll Size	6' Roll Weight (Average)	5' Roll Size	5' Roll Weight (Average)
<b>EverGuard® TPO Fleece-Back 100</b>	12' x 100' 3.66 m x 30.5 m 1,200 sq ft 111.5 sq m	350 lbs (159 kg)	10' x 100' 3.05 m x 30.5 m 1,000 sq ft 92.9 sq m	290 lbs (122 kg)	6' x 100' 1.83 m x 30.5 m 600 sq ft 55.7 sq m	185 lbs (84 kg)	5' x 100' 1.52 m x 30.5 m 500 sq ft 46.5 sq m	154 lbs (70 kg)
<b>EverGuard® TPO Fleece-Back 115</b>	12' x 100' 3.66 m x 30.5 m 1,200 sq ft 111.5 sq m	355 lbs (161 kg)	10' x 100' 3.05 m x 30.5 m 1,000 sq ft 92.9 sq m	295 lbs (133 kg)	6' x 100' 1.83 m x 30.5 m 600 sq ft 55.7 sq m	190 lbs (86 kg)	5' x 100' 1.52 m x 30.5 m 500 sq ft 46.5 sq m	158 lbs (72 kg)
<b>EverGuard® TPO Fleece-Back 135</b>	12' x 80' 3.66 m x 24.38 m 960 sq ft 89.2 sq m	310 lbs (140 kg)	10' x 80' 3.05 m x 24.38 m 800 sq ft 74.3 sq m	250 lbs (113 kg)	6' x 80' 1.83 m x 24.38 m 480 sq ft 44.6 sq m	120 lbs (54 kg)	5' x 80' 1.52 m x 24.38 m 400 sq ft 37.16 sq m	100 lbs (45 kg)
<b>Colors</b>	White							
<b>Storage</b>	Store on pallets in a clean, dry area at temperatures below 100° F (38° C).							
<b>Safety Warning</b>	Membrane rolls are heavy. Employ at least two people to position and install.							

Note: Membrane rolls shipped horizontally on pallets.

