



EverGuard EXTREME[®] (Fleece-back) Advanced Protection[®] TPO

MEMBRANE

70 MIL

Quality You Can Trust... From North America's Largest Roofing Manufacturer![™]

gaf.com

Why TPO

- Great Value—Superior performance at a cost-effective price
- Superior Seam Strength—Heat-welded seams provide greater seam strength to taped and other seams
- Long-Term Weathering—Excellent long-term heat and UV resistance
- Energy-Saving—Highly reflective and emissive white roof can help reduce energy costs and urban heat island effect
- Versatile Application Method

Why GAF EverGuard Extreme[®] Fleece-back TPO

- Factory-applied polyester fleece provides additional protection to the membrane offering a variety of benefits, including:
 - Does not require a slip sheet when re-covering over a variety of roofs
 - Provides enhanced puncture resistance, especially in areas more prone to hail
- Increases installation efficiency 2–3 times when installing fleece-back TPO with GAF 2-Part Roofing Adhesive (compared to standard TPO adhesives)
- Get the performance beyond an 80 mil TPO in a 70 mil product
- Best performing TPO in heat aging and UV tests—the best predictors of TPO performance
 - After accelerated heat aging at 275°F (135°C) for 190 days, EverGuard Extreme[®] Fleece-back TPO showed no cracking—while every one of the competitors' samples had failed
 - UV testing—greater than 4.6 times the industry standard (ASTM D6878 weather resistance test)
- Guarantees are available up to 30 years when using EverGuard Extreme[®] Fleece-back TPO 70 mil Membrane*
- High 3-year aged reflectance of 0.72 can help reduce energy costs
- Easier to install due to:
 - Large welding window
 - Most complete line of accessories
 - 10' (3.05 m) wide sheets

Installation

EverGuard Extreme[®] Fleece-back TPO can be installed with a wide range of applications:

- Mechanically Attached Application...for a quick and cost-effective system that can be installed practically year-round.
- Adhered Application... can be installed with EverGuard[®] WB181 Bonding Adhesive (water based) or hot asphalt for the smoothest appearance. Provides superior wind uplift performance.
- LRF-O Adhesive... two-part low-rise polyurethane foam adhesive that is low VOC and accommodates minor surface irregularities. Available in a cartridge or 5-gallon container.
- LRF-M Adhesive... two-part low-rise polyurethane foam adhesive that is low VOC and accommodates minor surface irregularities. Can also be used for ISO insulation applications. Available in a cartridge or 5-gallon container.
- 2-Part Roofing Adhesive... self-contained low-rise foam dispensing kit offering 20 squares per kit so there are fewer changeovers. Cost effective since you don't need spray equipment and no downtime/maintenance worries. Can also be used for ISO insulation applications.



Accessories

Field fabrication of TPO accessories is time-consuming, costly, and inconsistent, and can lead to unreliable details that compromise a watertight roofing system. EverGuard Extreme[®] TPO prefabricated accessories deliver consistent quality and eliminate the worry and problems often associated with field fabrication. They can also boost productivity up to 200%,** while reducing installed cost by up to 12%.

*See applicable guarantee for complete coverage and restrictions.

**Based on GAF estimate to field-fabricate flashing details.



U.S. only



California
Title 24
Compliant



TPO membranes meet the performance requirements of ICC ER-6030

EverGuard Extreme® Fleece-back TPO 70 mil Membrane

Applicable Standards

UL approved for use in the construction of Class A, B, or C roofs; FM Approved, ASTM D6878, Title 24 Compliant, Miami-Dade County Approved, Florida Building Code Approved, ENERGY STAR® Qualified.*

Physical Properties	ASTM Test Method	ASTM D6878 Minimum	EverGuard Extreme® Typical Test Data
1. Certain data is provided in MD (machine direction) x CMD (cross machine direction) format. 2. Data is based upon typical product performance, and is subject to normal manufacturing tolerance and variance.			
Nominal Thickness	ASTM D751	0.039" (min.) (0.99 mm)	0.070" (1.78 mm)
Breaking Strength	ASTM D751 Grab Method	220 lbf/in. (38.5 kn/m)	400 lbf x 360 lbf (596 x 536 kg/m)
Factory Seam Strength	ASTM D751	66 lbf (98.34 kg/m)	140 lbf (209 kg/m) (membrane failure)
Elongation at Break	ASTM D751	15%	30%
Heat Aging	ASTM D573	90% Retention of Breaking Strength and Elongation at Break	100%
Tear Strength	ASTM D751 8" x 8" (203 x 203 mm) Sample	55 lbf (81.95 kg/m)	70 lbf x 130 lbf (104 x 194 kg/m)
Puncture Resistance	FTM 101C Method 2031	Not Established	>380 lbs. (172 kg)
Cold Brittleness	ASTM D2137	-40°C	-40°C
Permeance	ASTM E96	Not Established	0.08 Perms
Dimensional Change	ASTM D1204 @158°F (70°C), 6 hrs.	+/-1%	0.4%
Water Absorption	ASTM D471 @158°F (70°C), 1 week	+/-3.0%	0.7%
Hydrostatic Resistance	ASTM D751 Method D	Not Established	430 psi
Ozone Resistance	ASTM D1149	No visible deterioration @ 7 x magnification	No visible deterioration @ 7 x magnification
Reflectivity (white) Initial/Aged	ASTM C1549	N/A	0.84/0.72
Emissivity (white) Initial/Aged	ASTM E408	N/A	0.84/0.91
Weather Resistance	ASTM G155/D6878	10,080 kJ/(m² · nm) at 340 nm	>46,000 kJ/(m² · nm) at 340 nm
Heat Aging	ASTM D573	240°F (115°C) for 32 weeks	128 weeks
Thickness Above Scrim	ASTM D7635	Min 30% of Total Thickness	25.7 mil (Nominal)
Guarantee			
Up to 30 years			

*ENERGY STAR® only valid in the USA

Product Data

Roll Size	Note: Product sizes, dimensions, and widths are nominal values and are subject to normal manufacturing/packaging tolerance and variation.				
	Colors	Full Size Roll	Full Roll Weight	Half Roll Size	Half Roll Weight
	White	10' x 50' (3.05 x 15.24 m) (500 sq. ft. [46.5 sq.m])	450 lbs. (204 kg)	5' x 100' (1.52 x 30.5 m) (500 sq. ft. [46.5 sq.m])	225 lbs. (102 kg)
Note: Membrane rolls shipped horizontally on pallets, stacked pyramid-style and banded.					
Storage	Store rolls on their sides on pallets or shelving in a dry area.				
Safety Warning	Membrane rolls are heavy. Position and install by at least two people.				