TremPly® TPO Single Ply Roofing Systems

Environmentally friendly Long-Lasting Single Ply Roofing System

FEATURES	BENEFITS
Great Value	• Excellent performance at a cost-effective price.
Excellent Seam Strength	• Heat-welded seams provide greater seam strength to taped and other seams.
Energy Saving	• Highly reflective and emissive white surface can help reduce energy use and urban heat island effect.
Inherently Flexible	• No need for plasticizers.
Fungal Resistant	• Doesn't require biocides.

DESCRIPTION

TremPly® TPO Single Ply Roofing System is a smooth back thermoplastic roofing membrane. It is offered in 5-foot and 10-foot-wide sheets that feature heat welded seam integrity and overall exceptional value. The TremPly TPO material has been formulated for long term weatherability and exceeds the ASTM heat aging requirement by almost 2 times.

BASIC USES

TremPly TPO is offered in white, gray and tan colors with 45 mil, 60 mil and 80 mil thickness. TremPly TPO is also available in a fleece back version which is detailed on a separate data sheet. They are excellent choices for roof overlays, replacement and new construction alike. Tremco also offers TremPly Max TPO as a higher performing alternative to the TremPly TPO.

COLOR

White, Tan, Gray

GRADE

TremPly TPO is offered in 45mil, 60mil, 80mil thicknesses. TremPly TPO is also available in a smooth back version in the TremPly Max TPO version in smooth or fleece back.

STORAGE LIFE

Store rolls on their sides on pallets or shelving in a dry area. Jobsite specific be sure to cover or tarp when not in use.

COVERAGE RATE

Available in 10'x100' (1,000 sq. ft.) and 5'x100' sheets (500 sq. ft.)

APPLICATIONS

TremPly TPO is available as a mechanically attached, fully adhered, ballasted, or a heat induction welded systems. Field seaming is accomplished by fusing the thermoplastic membrane with conventional hot air welding equipment. It comes with a full line of readily available, pre-fabricated accessories designed to save time and money. TremPly TPO Roofing Systems carry extensive FM Global and Underwriters Laboratories' approvals.

Please refer to Tremco application guides and project specific specifications or consult with your local Tremco Roofing sales representative for project specific application requirements.

Follow recommendations for applicable adhesives or installation methods in low temperature situations.

TremPly® TPO Single Ply Roofing Systems

PHYSICAL PROPERTIES

PROPERTY	ASTM D6878 MINIMUM	TPO 45 MIL	TPO 60 MIL	TPO 80 MIL
Normal Thickness ASTM D751	0.039" (min.) (0.99 mm)	0.045" (1.14mm)	0.060" (1.52 mm)	0.080" (2.03 mm)
Breaking Strength ASTM D751 Grab Method	220 lbf/in. (38.5 kn/m)	280 lbf x 270 lbf (417.2 x 402.3 kg/m)	305 lbf x 290 lbf (454 x 432 kg/m)	335 lbf x 320 lbf (499 x 477 kg/m)
Factory Seam Strength ASTM D751	66 lbf (98.34 kg/m)	110 lbf (membrane failure)(163.9 kg/m)	135 lbf (membrane failure) (201.1 kg/m)	160 lbf (membrane failure) (238.4 kg/m)
Elongation at break ASTM D751	15%	30%	30%	30%
Heat Aging ASTM D751	90% retention of Breaking Strength & Elongation at break	100%	100%	100%
Tear Strength ASTM D751 8" x 8" (203 x 203 mm) Sample	55 lbf (81.95 kg/m)	100 lbf x 120 lbf (149 x 178.8 kg/m)	75 lbf x 130 lbf (111.8 x 193.7 kg/m)	65 lbf x 160 lbf (96.85 x 238.4 kg/m)
Puncture Resistance FTM 101C Method 2031	Not Established	290 lb. (131 kg)	380 lb. (172 kg)	>380 lb. (172 kg)
Cold Brittleness ASTM D2137	(-40°C)	-40° C	-40° C	-40° C
Permeance ASTM E96	Not Established	0.08 Perms	0.08 Perms	0.08 Perms
Dimensional Change ASTM D1204 @ 158°F (70°C), 6 hrs.	(+/-1%)	0.40%	0.40%	0.40%
Water Absorption ASTM D471 @ 158°F (70°C), 1 week	(+/-3.0%)	0.70%	0.70%	0.70%
Hydrostatic Resistance ASTM D751 Method D	Not Established	380 psi	430 psi	430 psi
Ozone Resistance ASTM 1149	No visible deterioration @ 7x magnification	No visible deterioration @ 7x magnification	No visible deterioration @ 7x magnification	No visible deterioration @ 7x magnification
SRI (Solar Reflectance Index) Initial/Aged	N/A	94/81, 83 Aged Title 24	94/81, 83 Aged Title 24	94/81, 83 Aged Title 24
Reflectivity (white) initial/aged ASTM C1549, ASTM E903	N/A	0.76/0.68, 81.9% Reflectance	0.76/0.68, 81.9% Reflectance	0.76/0.68, 81.9% Reflectance
Emissivity (white) Initial/aged ASTM C1371, ASTM E403	N/A	0.90/0.83, 0.94	0.90/0.83, 0.94	0.90/0.83, 0.94
Weather Resistance ASTM G155/D6878	10,080 KJ/(m^2 x nm) at 340 nm	>20,000 KJ/(m^2 . nm) at 340 nm	>25,000 KJ/(m^2 . nm) at 340 nm	>25,000 KJ/(m^2 . nm) at 340 nm
Heat Aging ASTM D573	240°F (115°C) for 32 weeks	60 weeks	60 weeks	60 weeks
Thickness Above Scrim ASTM D7635	Min 30% of Total Thickness	15.8 mil (Nominal)	22.1 mil (Nominal)	31.4 mil (Nominal)

Note: *This data based on typical product performance for each thickness of membrane, and are subject to normal manufacturing tolerances and variances. Certain data are provided in MD (machine direction) x CMD (cross machine direction) format. Visit www.tremcoroofing.com for latest data.* ***Important Note:*** *Tremco TPO membranes meet and/or exceed ASTM D-6870 standards for thermoplastic TPO membranes.*

MAINTENANCE

Your local Tremco Roofing representative can provide you with effective maintenance procedures which may vary, depending upon specific conditions. Periodic inspections, early repairs and preventative maintenance are all part of a sound roof program

TECHNICAL SUPPORT

Your local Tremco Representative, working with the Technical Service Staff, can help analyze conditions and needs to develop recommendations for special applications. The services of the Tremco Research Center, which has earned a unique reputation in weatherproofing technology, complement and extend the service of the Tremco Service Staff.

TREMCO®
Roofing & Building Maintenance

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Timberline HDZ® Shingles

Benefits:

- **LayerLock® Technology** — mechanically fuses the common bond between overlapping shingle layers
- **Up to 99.9% nailing accuracy** — the StrikeZone® nailing area is so easy to hit that a roofer placed 999 out of 1,000 nails correctly in our test[1]
- **WindProven™ Limited Wind Warranty** — when installed with the required combination of GAF Accessories, Timberline HDZ® Shingles are eligible for a wind warranty with no maximum wind speed limitation[3]
- **Dura Grip™** sealant pairs with the microgranule surface of the StrikeZone® nailing area. Then, an asphalt to-asphalt bond cures for durability, strength, and exceptional wind uplift performance.
- **Great value** — architecturally stylish but practically priced, with a Lifetime† limited warranty
- **25-year StainGuard Plus™ Algae Protection Limited Warranty** against blue-green algae discoloration.[2] Proprietary GAF Time-Release Algae-Fighting Technology helps protect your shingles from unsightly stains.
- **For the best look** — use TimberTex® Premium Ridge Cap Shingles or TimberCrest® Premium SBS-Modified Ridge Cap Shingles

Colors:

Product details:

Product/System Specifics

- Fiberglass asphalt construction
- **Dimensions (approx.):** 13 1/4" x 39 3/8" (337 mm x 1,000 mm)
- **Exposure:** 5 5/8" (143 mm)
- **Bundles/Square:** 3
- **Pieces/Square:** 64
- **StainGuard Plus™ Algae Protection[2] Limited Warranty**
- **Hip/Ridge:** TimberTex®; TimberCrest®; Seal-A-Ridge®; Ridglass®[5]
- **Starter:** Pro-Start®; QuickStart®; WeatherBlocker™

Applicable Standards & Protocols

- UL Listed to ANSI/UL 790 Class A
- Classified by UL in accordance with ICC-ES AC438
- Meets ASTM D7158, Class H
- Meets ASTM D3161, Class F
- Meets ASTM D3018, Type 1
- Meets ASTM D3462[4]
- ICC-ES Evaluation Reports ESR-1475 and ESR-3267
- Meets CSA A123.5
- CAN/ULC-S107 Class A Roofing Fire Rating

† Lifetime refers to the length of warranty coverage provided and means as long as the original individual owner(s) of a single-family detached residence [or eligible second owner(s)] owns the property where the qualifying GAF products are installed. For other owners/structures, Lifetime coverage is not applicable. Lifetime coverage on shingles requires the use of GAF Lifetime Shingles only. See the *GAF Shingle & Accessory Limited Warranty* for complete coverage and restrictions. Visit gaf.com/LRS for qualifying GAF products. Lifetime coverage on shingles and accessories requires the use of any GAF Lifetime Shingle and at least 3 qualifying GAF Accessories. See the *GAF Roofing System Limited Warranty* for complete coverage and restrictions. For installations not eligible for the *GAF Roofing System Limited Warranty*, see the *GAF Shingle & Accessory Limited Warranty*. Visit gaf.com/LRS for qualifying GAF products.

[1] Results based on study conducted by Home Innovation Research Labs, an independent research lab, comparing installation of Timberline HD® Shingles to Timberline HDZ® Shingles on a 16-square roof deck using standard 4-nail nailing pattern under controlled laboratory conditions. Actual results may vary.

[2] 25-year StainGuard Plus™ Algae Protection Limited Warranty against blue-green algae discoloration is available only on products sold in packages bearing the StainGuard Plus™ logo. See *GAF Shingle & Accessory Limited Warranty* for complete coverage and restrictions, and qualifying products.

[3] 15-year WindProven™ limited wind warranty on GAF Shingles with LayerLock™ Technology requires the use of GAF Starter Strips, Roof Deck Protection, Ridge Cap Shingles, and Leak Barrier or Attic Ventilation. See *GAF Roofing System Limited Warranty* for complete coverage and restrictions. Visit gaf.com/LRS for qualifying GAF products. For installations not eligible for the *GAF Roofing System Limited Warranty*, see the *GAF Shingle & Accessory Limited Warranty*.

[4] Periodically tested by independent and internal labs to ensure compliance with ASTM D3462 at time of manufacture.

Note: It is difficult to reproduce the color clarity and actual color blends of these products. Before selecting your color, please ask to see several full-size shingles.

We protect what matters most™

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GAF Timberline HDZ®
High Definition® Lifetime[1] Shingles

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GAF LAYERLOCK® TECHNOLOGY

North America's #1-selling shingle just got better — again

Now with GAF Time-Release Algae-Fighting Technology and LayerLock® Technology, Timberline HDZ® offers everything you can expect from an architectural shingle roof, and more.