Roofing Products International

Get the Royal Edge Advantage with RPI

Re-Flex White EPDM Membrane

RPI EPDM MEMBRANE

DESCRIPTION

RPI Re-Flex EPDM membrane is a white 60 mil (1. 52 mm) or 90 mil (2.28 mm) non-reinforced elastomeric membrane designed for use in new or re-roof low slope fully adhered single-ply membrane systems. Re-Flex 60 mil membrane is available is 10' and 20' widths and lengths up to 100'.
Re-Flex 90 mil membrane is available in widths of 10' and lengths up to 100'.
RPI Re-Flex EPDM membrane meets ENERGY STAR and LEED cool roof standards for initial and aged solar reflectance and thermal emittance.

THE RPI ROYAL EDGE ADVANTAGE

- Available in multiple widths and lengths to accommodate large or small installation requirements.
- Factory applied Seam Tapes and Re-Flex Flashings with Tape enhanced system performance and ease of installation.
- Resistance to outdoor weathering is highest is the industry with 25,200 kJ/m^2 total radiant exposure without cracking or crazing.
- The most dimensionally stable, heat resistant membrane that stays flexible down to -40^o F.
- Reduces carbon footprint by lowering air conditioning costs.
- Re-Flex EPDM's superior elongation and weathering performance result in excellent hail damage resistance meeting a UL 2218 Class 4 rating.
- Highly resistant to fungi growth (Zero growth in ASTM G21 test).
- A complete line of UL and FM approved Re-Flex EPDM flashings, adhesives and accessories.

APPLICATION INSTRUCTIONS

RPI Re-Flex EPDM is designed to be installed as part of a fully adhered system using RPI adhesives, Flashings, Tapes, and other accessories. Refer to the RPI Specification Manual for more complete installation details.

INSTALLATION PRECAUTIONS

Due to Re-Flex EPDMs highly reflective surface, UV filtering sunglasses should be worn during installation.

During wet or cold conditions, extreme caution should be exercised when walking on the membrane. Frost and accumulations of ice and snow may be difficult to detect and will make the surface slippery.

During cold weather applications, take extra care to maintain a clean work area, free of debris. Frost that remains under pieces of loose membrane create a hazardous work condition.

When installation temperatures are at 50^{o}F or falling, the following seaming procedures are recommended.

1. Using a hot-air gun, heat the primed area of the bottom sheet as the pre-applied tape of the top sheet is applied and pressed into place.
2. Prior to hand rolling the top sheet seam area into position, apply heat to the top side of the membrane, warming the sheet. Caution: The sheet should not be hot to the touch. Do not overheat, burn, or blister the membrane.
3. To ensure complete and proper adhesion in cold weather applications (temperatures of 50^{o}F or lower), keep the flashings stored in a room temperature until installation. The primed area and flashing membrane may be warmed with a hot- air gun while installing the flashings.

Radiative Properties for ENERGY STAR* Cool Roof Rating Council (CCRC)

Physical Property	Test Method	Re-Flex EPDM
ENERGY STAR Initial solar refectance	Solar Spectrum Refectometer	0.76
ENERGY STAR Solar Reflectance after 3 yrs.	Solar Spectrum Reflectometer (after cleaning)	0.64
CCRC Initial solar reflectance	ASTM C1549	0.76
CCRC Solar reflectance after 3 yrs.	ASTM C1549 (uncleaned	0.64
CCRC Initial thermal emittance	ASTM C1371	0.90
CCRC Initial thermal emittance after 3 yrs.	ASTM C1371 (uncleaned)	0.87
LEED® Thermal emittance	ASTM E408	0.91
SRI Solar Reflectance Index	ASTM E1980	94

The ENERGY STAR program recommends using the Roof Savings Calculator available at rsc.ornl.gov to calculate and determine if a white reflective membrane roof will save or cost you money compared to a dark-colored membrane. The results are dependent upon geographic climate conditions, the building location, and other variables.

LEED® Information

Pre-consumer Recycled Content	0%
Post-consumer Recycled Content	0%
Manufacturing Location	Greenville, IL
Solar Reflectance Index	N/A

Roofing Products International, Inc. 57460 Dewitt St. Elkhart, IN 46517 800-628-2957 Fax: 574-294-3450 www.rpiroyaledge.com

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APPROVALS

RPI Re-Flex EPDM is a .060 mil and.090 mil white elastomeric membrane designed to be installed as part of an FM Approved and UL Classified Assembly.

Typical Properties and Characteristics

Physical Property	Test Method	SPEC. (PASS)	Typical
Tolerance on Nominal Thickness, %	ASTM D412	±10	±10
Tensile Strength, min, psi (MPa)	ASTM D412	1305 (9)	1465 (10.1)
Elongation, Ultimate, min, %	ASTM D412	300	540
Tear Strength, min, lbf/in (kN/m)	ASTM D624 (Die C)	150 (26.3)	187 (32.7)
Factory Seam Strength, min	Modified ASTM D816	Membrane Rupture	Membrane Rupture
Resistance to Heat Aging* Properties after 28 days @ 240°F (116°C) Tensile Strength, min, psi (MPa) Elongation, Ultimate, min, % Tear Strength, min, lbf/in (kN/m) Linear Dimensional Change, max, %	ASTM D573 ASTM D412 ASTM D412 ASTM D624 ASTM D1204	 1205 (8.3) 200 125 (21.9) ±1.0	 1345 (9.3) 280 185 (32.4) -0.2
Ozone Resistance* Condition after exposure to 100 pphm Ozone in air for 168 hours @ 104°F (40°C) Specimen is at 50% strain	ASTM D1149	No Cracks	No Cracks
Brittleness Temp., max, °F (°C)*	ASTM D746	-49 (-45)	-67 (-55)
Resistance to Water Absorption* After 7 days immersion @ 158°F (70°C) Change in mass, max, %	ASTM D471	+8, -2	+3.3
Water Vapor Permeance* Max, perms	ASTM E 96 (Proc. B or BW)	0.10	0.02
Flexibility/Torsion DMA	ASTM D5279-08	N/A	55 MPa @ -40°F
Fungi Resistance	ASTM G21	N/A	0 (No Growth)
Resistance to Outdoor (Ultraviolet) Weathering* Xenon-Arc, total radiant exposure at 0.70 W/m² irradiance, 80°C black panel temperature	ASTM G155	No Cracks No Crazing 7,560 kJ/m² 3,000 hrs	No Cracks No Crazing 25,200 kJ/m² 10.000 hrs
At 0.35 W/m² irradiance, 80°C black panel temperature		6,000 hrs	20,000 hrs
Weight, lbs/ft² (kg/m²) 60-mil 90-mil			0.37 (1.8) 0.60 (2.9)

* Typical properties and characteristics are based on samples tested and are not guaranteed for all samples of this product. This data and information is intended as a guide and does not reflect the specification range for any particular property of this product.

Note: Roofing Products International Re-Flex EPDM Membrane meets or exceeds the minimum requirements set forth by ASTM D4637 for Type I, non-reinforced EPDM single-ply roofing membrane.

SEAMING RECOMMENDATIONS

1. All membranes and substrates must be clean, dry, and free of dirt, dust, and oils. Before applying Seam Tape Primer, clean all metal flashings with Membrane cleaner to remove any residual manufacturing oils or other contaminants.
2. Apply RPI Royal Edge Seam Tape Primer. On Royal Edge Clean Sheets, the Seam Tape Primer can be applied using a 3/8" nap roller. On any aged or talc sheet membranes, Seam Tape Primer must be applied using RPI Scrub Pads after the membrane has been thoroughly cleaned with Membrane Cleaner. IMPORTANT: Do not over apply the Seam Tape Primer. The finished primed surface should have a smooth flat sheen. Excessive primer will not enhance the adhesion of the tape.
3. Allow the primed area to "flash-off". Check the primer using the finger-push method. Do not attempt to apply any flashings to primed areas that have not sufficiently flashed-off.
4. Remove the required area of release liner and mate the tape membrane surface to the primed area. Starting in the middle of the flashing piece to minimize air pockets, mate the membrane to the primer using an even, firm, hand pressure.
5. Using a 2" steel or hypalon hand roller, roll the entire flashing from the middle of the flashing to the edges.
6. Apply Lap Sealant at required flashing edges and intersections.
7. To ensure complete and proper adhesion in cold weather applications (temperatures of 50° F or lower), keep the flashings stored in a room temperature until installation. The primed area and flashing membrane may be warmed with a hot- air gun while installing the flashings.

FM APPROVED

CLASSIFIED C UL US

See UL Roofing Materials and Systems Directory R10073

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