



TECHNICAL DATA BULLETIN

WEATHERBOND RBR WHITE .060" STANDARD EPDM MEMBRANE

GENERAL:

WeatherBond RBR White EPDM is a .060"-thick (1.52 mm) roofing membrane, Ethylene Propylene Diene Terpolymer (EPDM) based elastomeric homogenous roof covering which may be used for new single-ply roof construction and re-roofing applications. This factory fabricated white-on-black membrane is available in widths up to 20' and lengths up to 100'. WeatherBond RBR White EPDM membranes are specially formulated to inhibit the spread of flames and meet or exceed code body testing criteria for fire retardant roofing membranes. WeatherBond RBR White EPDM Membranes meet UL Class "A" testing standards.

TYPICAL PROPERTIES AND CHARACTERISTICS:

See Table on next page.

CAUTIONS AND WARNINGS:

- Sunglasses that filter out ultraviolet light are strongly recommended since the white surface intensifies sunlight through reflection.
- White surfaces reflect heat and may promote slippery conditions due to frost and ice build up. Exercise extreme caution during cold conditions to prevent falls.
- Care must be exercised when working close to a roof edge. When surrounding area is snow covered, roof edge may not be clearly visible.
- Use proper stacking procedures to ensure sufficient stability of the materials.
- Exercise caution when walking on wet membrane. Membranes are slippery when wet.

INSTALLATION:

White .060" (1.52 mm) membrane is only used in Fully-Adhered Roofing Systems.

White Fully-Adhered Roofing System: Insulation is mechanically attached to the roof deck. The substrate and membrane are coated with WeatherBond RBR LC-60 Bonding Adhesive. The membrane is then rolled into place and brushed down. 3" White EPDM Seam Tape and Multipurpose Primer are applied to the seam area.

Consult WeatherBond specifications for complete installation information.

**WHITE .060" STANDARD EPDM MEMBRANE
TYPICAL PROPERTIES AND CHARACTERISTICS**

Physical Property	Test Method	SPEC. (Pass)	Typical
Tolerance on Nominal thickness, %	ASTM D 412	±10	±10
Weight, 1 bm/ft ² (kg/m ²)			0.39 (1.9)
Tensile Strength, min, psi (Mpa)	ASTM D 412	1305 (9)	1685 (11.6)
Elongation, Ultimate, min, %	ASTM D 412	300	480
Tear Strength, min, lbf/in (kN/m)	ASTM D 624 Die C	150 (26.3)	200 (35.0)
Factory Seam Strength, min	Modified ASTM D 816	Membrane Rupture	Membrane Rupture
Resistance to Heat Aging* Properties after 1 week @ 240° F (116° C)	ASTM D 573		
Tensile Strength, min, psi (Mpa)	ASTM D 412	1205 (8.3)	1550 (10.7)
Elongation, Ultimate, min, %	ASTM D 412	200	250
Tear Strength, min, lbf/in (kN/m)	ASTM D 624	125 (21.9)	185 (32.4)
Linear Dimensional Change, max, %	ASTM D 1204	±1.0	-0.5
Ozone Resistance * Condition after exposure to 100 pphm Ozone in air for 168 hours @ 104° F (40° C) Specimen is at 50% strain	ASTM D 1149	No cracks	No cracks
Brittleness Temp., max, deg. F (deg. C)*	ASTM D 746	-49 (-45)	-67 (-55)
Resistance to Water Absorption* After 7 days immersion @ 158° F (70° C) Change in mass, max, %	ASTM D 471	+8, -2	+3.6
Water Vapor Permeance* Max, perms	ASTM E 96 (Proc B or BW)	0.10	0.05
Resistance to Outdoor (Ultraviolet) Weathering* Xenon-Arc, 7560 kJ/m ² total radiant exposure at 0.70 W/m ² irradiance, 80° C black panel temp.	ASTM D 4637 Conditions	No Cracks No Crazing	No Cracks No Crazing
* Not a Quality Control Test due to the time required for the test or the complexity of the test. However, all tests are run on a statistical basis to ensure overall long-term performance of the sheeting.			

Radiative Properties for ENERGY STAR®, Cool Roof Rating Council (CRRC) and LEED™

	TEST METHOD	WEATHERBOND WHITE EPDM
ENERGY STAR initial solar reflectance	Solar Spectrum Reflectometer	0.84
ENERGY STAR solar reflectance after 3 years	Solar Spectrum Reflectometer (after cleaning)	0.80
CRRC initial solar reflectance	ASTM C1549	0.76
CRRC solar reflectance after 3 years	ASTM C1549 (uncleaned)	pending
CRRC initial thermal emittance	ASTM C1371	0.90
CRRC thermal emittance after 3 years	ASTM C1371 (uncleaned)	pending
LEED thermal emittance	ASTM E408	0.91
SRI (Solar Reflectance Index)	ASTM E1980	105

An ENERGY STAR qualified low slope roof product must have an initial solar reflectance of at least 0.65 and a 3 year aged solar reflectance of at least 0.50. Cleaning of the aged roof surface is permitted by the ENERGY STAR test protocol.

The Cool Roof Rating Council (CRRC) does not specify minimums for reflectance or emittance but they do require specific protocols for testing and reporting. Cleaning of the aged roof surface is **not** permitted for determination of radiative properties after 3 years.

A LEED “point” may be earned if a roof material is ENERGY STAR qualified **and** has a thermal emittance of at least 0.90 as determined by ASTM E408.

Solar Reflectance Index (SRI) is calculated per ASTM E 1980. The SRI is a measure of the roof’s ability to reject solar heat, as shown by a small temperature rise. It is defined so that a standard black (reflectance 0.05, emittance 0.90) is 0 and a standard white (reflectance 0.80, emittance 0.90) is 100. Materials with the highest SRI values are the coolest choices for roofing. Due to the way SRI is defined, particularly hot materials can even take slightly negative values, and particularly cool materials can even exceed 100.

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