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PRODUCT DATA SHEET

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PRODUCT NAME AND SYNONYMS: **REINFORCED TPO MEMBRANE**

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<u>PHYSICAL PROPERTIES:</u>	<u>TEST METHOD</u>	<u>PROPERTY OF UNAGED SHEET</u>	<u>PROPERTY AFTER ASTM D573 AGING¹ 28 DAYS @ 240°F</u>
Tolerance on nominal thickness, %	ASTM D751	± 10	
Thickness over scrim, in. (mm) 45-mil 60-mil	ASTM D 6878 Optical Method (avg. of 3 areas)	0.015 (0.381) ± 10% 0.020 (0.508) ± 10%	
Breaking strength, lbf (kN)	ASTM D751 Grab Method	225 (1.0) min. 340 (1.5) typical	225 (1.0) min. 340 (1.5) typical
Elongation at break of fabric, %	ASTM D751	25 typical	25 typical
Tearing strength, lbf (N) 8 by 8 in. specimen	ASTM D751 B Tongue Tear	55 (245) min. 130 (578) typical	55 (245) min. 130 (578) typical
Brittleness point, °F (°C)	ASTM D2137	-40 (-40) max. -50 (-46) typical	
Linear Dimensional change (shrinkage), % After 6 hours at 158 °(70°C)	ASTM D 1204	+/-0.5 max. -0.2 typical	
Ozone resistance, 100 pphm, 168 hours	ASTM D1149	No cracks	No cracks
Resistance to water absorption After 7 days immersion 158°F (70°C) Change in mass, %	ASTM D471 (top surface only)	4.0 max. 2.0 typical	
Resistance to microbial surface growth, rating (1 is very poor, 10 is no growth)	ASTM D3274 2 yr S. Florida	9-10 typical	
Field seam strength, lbf/in. (kN/m) Seam tested in peel	ASTM D1876	25 (4.4) min. 60 (10.5) typical	
Water vapor permeance, Perms	ASTM E96	0.10 max. 0.05 typical	
Puncture resistance, lbf (N) (see supplemental section for additional puncture data)	FTM 101C Method 2031	250 (1110) min. 300 (1330) typical 45-mil 350 (1560) typical 60-mil	250 (1110) min. 300 (1330) typical 45-mil 350 (1560) typical 60-mil
Resistance to xenon-arc weathering ² Xenon-Arc, 17,640 kJ/m ² total radiant exposure, visual condition at 10X	ASTM G155 0.70 W/m ² 80 °C B.P.T.	No cracks No loss of breaking or tearing strength	

¹ Aging conditions are 28 days at 240°F (116 °C) equivalent to 400 days at 176 °F (80 °C) for breaking strength, elongation, tearing strength, ozone and puncture resistance

SUPPLEMENTAL APPROVALS, STATEMENTS AND CHARACTERISTICS:

	TEST METHOD	WHITE TPO	TAN TPO	GRAY TPO
ENERGY STAR initial solar reflectance	Solar Spectrum Reflectometer	0.87	0.68	n/a
ENERGY STAR solar reflectance after 3 years	Solar Spcetrum Reflectometer (after cleaning)	0.83	0.64	n/a
CRRC initial solar reflectance	ASTM C1549	0.79	0.66	0.26
CRRC solar reflectance after 3 years	ASTM C1549 (uncleaned)	pending	pending	pending
CRRC initial thermal emittance	ASTM C1371	0.90	.089	0.89
CRRC thermal emittance after 3 years	ASTM C1371 (uncleaned)	pending	pending	pending
LEED thermal emittance	ASTM E408	0.95	0.95	0.95

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