

MC-Plan 500 MF

Reinforced EPDM membrane.

- PRODUCT DESCRIPTION:**
- **MC-Plan 500 MF** (Reinforced) EPDM Membrane is an internally reinforced, cured single-ply roofing membrane that features a 9 x 9, 1,000 denier polyester weft inserted reinforcing scrim for increased puncture resistance. It is available in 0.045" (1.1 mm), 0.060" (1.5 mm) and 0.075" (1.9 mm) thicknesses. Designed with fire retardants, **MC-Plan 500 MF** Membrane can meet qualification for UL Class A for slopes up to 3" (76 mm), depending on the roofing assembly. **NOTE: MC-Plan 500 MF** Membrane is also available if higher slope classification is required.

- PREPERATION WORK:**
- Substrates must be clean, dry, smooth, and free of sharp edges, fins, loose or foreign materials, oil, grease, and other materials that may damage the membrane.
 - All roughened surfaces that can damage the membrane shall be repaired as specified to offer a smooth substrate.
 - All surface voids greater than 1/4" (6 mm) wide shall be filled with an acceptable fill material.

TECHNICAL DATA: Typical properties (Meets or exceeds ASTM D4637, Type II scrim-reinforced EPDM Single-Ply roofing membranes)

Characteristic	ASTM Min. Value	45 mil	Typical Performance 60 mil	75 mil
Thickness (D412)	1.143 mm + 0.178 mm/ -0.127 mm (0.045" + 0.007"/ - 0.005")	1.168 mm (0.046")	---	---
	1.52 mm + 0.229 mm/ -0.152 mm (0.060" + 0.009"/ -0.006")	---	1.473mm (0.058")	---
	1.90 mm + 0.279 mm/ - 0.203 mm (0.075" + 0.011"/ - 0.008")	---	----	1.956 mm (0.077")
EPDM Coating Scrim (D7635)	0.38 mm (0.015")	0.559 mm (0.022")	0.762 mm (0.030")	0.838 mm (0.033")
Breaking Strength (D751, Grab Method)	400 M (90 lbf)	969.7 M (218 lbf)	880.7 N (198 lbf)	1063.1 N (239 lbf)
Dynamic Puncture Resistance @10 J (D5635)	Pass	Pass	Pass	Pass
Static Puncture Resistance @25 kg (D5602)	Pass	Pass	Pass	Pass
Elongation Ultimate, min.: % (D412, Die C)	250% Minimum (EPDM only; no scrim)	577%	Pass	Pass
Elongation @ fabric break (ultimate) (D751, Grab Method)	15% MD 15% CD	26.7% MD 35.2% CD	28.0% MD 30.2% CD	27.1% MD 36.3% CD
Tear Strength (D751, B- Tongue Tear)	45 N (10 lbf) Minimum	516.0 N (116 lbf)	516.0 N (116 lbf)	498.2 N (112 lbf)
Brittleness Point (D2137)	-45°C (-49°F) Maximum	Pass	Pass	Pass
Ozone Resistance, no cracks (D1149)	Pass	Pass	Pass	Pass

Characteristic	ASTM Min. Value	45 mil	Typical Performance	
			60 mil	75 mil
Breaking Strength after Heat Aging	356 N (80 lbf)	1072.0 N (241 lbf)	Pass	Pass
Elongation, Ultimate after Heat Aging*	200% Minimum (EPDM only; no scrim)	517%	Pass	Pass
Linear Dimensional Change after Heat Aging*	± 1%	-0.8%	Pass	Pass
Water Absorption by Mass	+ 8%/ -2% (EPDM only; no scrim)	+ 1.0%	Pass	Pass
Factory Seam Strength (D816, Method B)	8.8 kN/m (50 lbf/in) or sheet failure	N/A (no factory seams)	N/A (no factory seams)	N/A (no factory seams)
Visual Inspection after Xenon-Arc Exposure**	Pass	Pass	Pass	Pass

(*) Heat age EPDM membrane for: 166 ± 1.66 hours at 240 ± 4°F (116 ± 2°C), followed by specified physical testing.

(**) Weather Resistance shall be Practices G151 and G155 Xenon-Arc as follows:

Filter Type:	Daylight
Irradiance:	0.35 to 0.70 W/(m ² .nm) @340 nm [37.8 MJ/(m ² .nm) @ 300 to 400 nm]
Un-insulated Black Panel Temp:	690 minutes ± 15 minutes light, 30 minutes light plus water spray
Relative Humidity:	176° ± 4°F (80° ± 2°C)
Spray Water:	De-ionized
Specimen Rotation:	Every 315 KJ/(m ² .nm) @ 340 nm [37.8 MJ/(m ² .nm) @ 300 to 400 nm]
Exposure:	10,080 KJ/(m ² .nm) @ 340 nm [1209.6 MJ/(m ² .nm) @ 300 to 400 nm]

For use of the product as a component in an air barrier assembly, please consult your Regional Technical Coordinator, Code Agency or Authority having Jurisdiction (AHJ) for the acceptable air barrier assembly details.

Property specifications are based on laboratory tests and may vary in practical application. To determine the individual technical suitability, preliminary suitability tests should be carried out under the application conditions.

PRODUCT CHARACTERISTICS:

Storage	Store away from sources of punctures and physical damage.
	Assure that structural decking will support the loads incurred by material when stored on rooftop.
	The deck load limitations should be specified by the project designer.
	Store away from ignition sources as membrane will burn when exposed to open flame.

Packaging			
Membrane Thickness	Width*	Length	Weight
0.045" (1.14 mm)	10' (3.05 m)	100' (30.5 m)	0.32 lb/f t2 (1.6 kg/m ²)
0.060" (1.52 mm)			0.42 lb/f t2 (2.1 kg/m ²)
0.075" (1.91 mm)**			0.55 lb/f t2 (2.7 kg/m ²)

Note: The information provided here is based on our experience and correct to the best of our knowledge. It is, however, not binding. It will need to be adapted to the requirements of the individual building projects, to the specific application and to non-standard local conditions. Our data refers to the accepted engineering rules, which have to be observed during application. Given these preconditions we shall be liable for the accuracy of the information given as outlined in our sales and delivery terms and conditions. Recommendations by our employees that deviate from this information are only binding for us if they have been confirmed in writing. In all cases, the generally accepted rules and practices reflecting the current state of the art must be adhered.

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