Johns Manville

Single Ply Roofing Systems (TPO)

☐JM TPO-45 ☐JM TPO-60

Description

JM TPO-45 and TPO-60 are thermoplastic polyolefin (TPO) membranes reinforced with a polyester fabric, and designed for use in mechanically fastened and adhered roofing applications.

Use

JM TPO membranes can be installed in new, reroof (tear-off) and recover roof constructions. In recover construction, if the existing roof is sound, the JM roof can eliminate the cost of disposing of the original roof.

Colors

White, Grey and Tan

Special colors are available with extended lead times. Minimum order quantities may apply. Contact your local JM sales representative for additional information.

Standard Sizes

Color	Width	Length
White	4 ft. (1.2 m)	100 ft. (30.5 m)
	6 ft. 2 in. (1.9 m)	100 ft. (30.5 m)
	8 ft. (2.4 m)	100 ft. (30.5 m)
	10 ft. (3.0 m)	100 ft. (30.5 m)
	12 ft. 4 in. (3.8 m)	100 ft. (30.5 m)
Grey and Tan	4 ft. (1.2 m)	100 ft. (30.5 m)
	8 ft. (2.4 m)	100 ft. (30.5 m)

Approvals

JM mechanically fastened and adhered TPO Roof Systems are classified by UL (Underwriters Laboratories, Inc.) and FM Global (Factory Mutual).

Energy and the Environment

Energy Star®	Pass	Reflectivity:	0.78		
Title 24	Pass	Reflectivity:	0.78	Emissivity:	0.87
LEED		Reflectivity:	0.78	Emissivity:	0.90
		Recycled Content			
		Post Consumer: 0% Post Industrial: 3-5%			
		Producing Locations: Tuscumbia, AL			

Results shown are for initial reflectivity and emittance for white membranes; emissivity values for Title 24 are tested per ASTM C 1371; LEED emissivity values are tested per ASTM E 408.

Installation

Because JM TPO membranes are thermoplastic, they can be rolled out onto the roof substrate and easily welded into one homogeneous sheet using hot air welding procedures.

JM TPO membranes can be mechanically attached or adhered to the structural roof deck in accordance with FM Global requirements, building codes, published standard fastening patterns or adhesives recommendations.

Refer to JM TPO Roofing Systems Guide Specifications, Detail Drawings and Technical Bulletins for instructions.

JM TPO membranes meet or exceed all of the requirements of ASTM D 6878.

Property	ASTM Test Method	ASTM Minimum	Typical Values
Weight, lbs./sq. ft. (kgs./sq. meter)	D 751		
JM TPO-45			0.21 (1.03)
JM TPO-60			0.29 (1.42)
Thickness, in. (mm)	D 751	0.039 (1.0)	
JM TPO-45			0.045 (1.1)
JM TPO-60			0.060 (1.5)
Tolerance on Nominal Thickness	D 751	+/- 10%	+/- 10%
Thickness Over Scrim, in. (mm)	D 6878 Annex A1	0.012 (0.30)	
JM TPO-45			0.015 (0.38)
JM TPO-60			0.022 (0.56)
Breaking Strength, lbf (N)	D 751	220 (979)	330 (1468)
Field Seam Strength, lbf (N)	D 751	66 (294)	75 (330)
Elongation at Break of Fabric %	D 751	15	30
Tearing Strength, lbf (N)	D 751	55 (245)	156 (694)
Accelerated Weathering	G 151/154		Pass

Property	ASTM Test Method	ASTM Minimum	Typical Values
Brittleness Point, Max., ºF (ºC)	D 2137	-40 (-40)	-49 (-45)
Ozone Resistance	D 1149	Pass	
Properties After Heat Aging	D 573/751	Pass	
Breaking Strength, lbf (kN)		225 (1)	330 (1.5)
Elongation at Fabric Break, Min. , %		13.5	25
Tearing Strength lbf (kN)		55 (.25)	156 (.7)
Weight Change, Max., Mass %		+/- 1	-0.02
Water Absorption, Max., Mass %	D 471	+/- 3	+ 1.2
Water Vapor Permeance	E 96		0.012
Linear Dimension Change, Max. %	D 1204	+/- 1	-0.01
Puncture Resistance, lbf (N)	FTM 101C Method 2031 E 903	200 (890)	337 (1500)

Refer to the Material Safety Data Sheet prior to using JM TPO. Material Safety Data Sheet is available by calling 800-654-3103 or online at www.jm.com.

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