



FLEX 45 MIL TPO PLUS ROOF MEMBRANE **(REINFORCE THERMOPLASTIC POLYOLEFIN MEMBRANE)**

PRODUCT DESCRIPTION

The Flex 45 TPO Plus polyester reinforced thermoplastic polyolefin (TPO) roofing membranes are designed for use in mechanically fastened and adhered roofing systems. The Flex 45 TPO Plus membrane is manufactured in widths of 5', 6', 10' and 12' for economical installations. Flex 45 TPO Plus membranes offer the proven weathering resistance of rubber (derived from its high ethylene propylene rubber content) combined with the thermoplastic properties of polypropylene. The combination results in a roofing membrane with hot air welded seams and the durability of EPDM roofing membranes. The Flex 45 TPO Plus membranes polyester reinforcement allows for structural movement with no splitting or cracking. The Flex 45 TPO Plus membrane is also highly impact and puncture resistant. The specially formulated membrane offers excellent resistance to solar UV and chemical exposure as well as remaining flexible in cold temperatures.

USE

Flex 45 TPO Plus membranes can be installed in new, re-roof (tear-off) and recover roof constructions. In recover construction, if the existing roof is structurally acceptable, the Flex roof system can save the cost of disposing of the original roof system. Flex 45 TPO Plus membranes can be installed directly over layers of approved roof board insulation. The membrane is secured to the deck using an approved fastening system utilizing methods that have been independently tested for wind uplift. The Flex 45 TPO Plus membranes are true thermoplastics, therefore all seams are sealed by the hot air welding method creating a seam as strong as the original membrane.

FEATURES

- Excellent low temperature impact resistance
- No Halogenated Flame Retardants
- Plasticizer Free - Chlorine Free
- Recyclable environmentally friendly product
- Chemically resistant to acids, bases and restaurant exhaust emissions
- Available in White, Gray or Tan
- White and Tan Flex 45 TPO Plus Membranes are LEED™ Qualified
- White and Tan Flex 45 TPO Plus Membranes are Energy Star® roof products

INSTALLATION

The roofing system must be installed by an authorized Flex Roofing Systems TPO applicator. The Flex applicator must inspect the area to be roofed to determine if the installation of a Flex Roof System is acceptable. The substrate must be clean, smooth, dry, free of flaws, debris and other irregularities. Follow Flex Specifications and NRCA recommendations for installation of wood nailers around perimeters and penetrations. Install approved insulation according to Flex's standard fastening requirements or applicable code, whichever is more stringent. The membrane is mechanically attached using the disk and fastener in the seam method. Fastener spacing increments are determined by the

projects specification criteria and or printed guide specifications. For adhered systems, the membrane is laminated to the appropriate substrate using Flex Bonding Adhesive. All seams are completed by the hot air welding method. Contact the Flex Technical Service Department for the specific design requirements and installation procedures for these two systems.

PHYSICAL PROPERTIES

<u>Property</u>	<u>Test Procedure</u>	<u>Specification</u>
Color		white, gray or tan
Roll Size		5'x100', 6'x100' 10'x100' and 12'x100'
Weight		12'x100' roll = 307 lbs. 10'x100' roll = 258 lbs. 6'x100' roll = 154 lbs. 5'x100' roll = 128 lbs.
Thickness	ASTM D751	0.045"
Thickness over scrim	ASTM D751	0.0158"
Breaking Strength (lbf)	ASTM D751	280 x 270
Seam Strength (lbf)	ASTM D751	110
Elongation (min%)	ASTM D751	30%
Heat Aging	ASTM D573	100%
Heat Aging	ASTM D573	60 weeks
Tear Strength (lbf)	ASTM D751	100 x 120
Puncture Resistance	FTMS 101C 2031	290 lbs.
Cold Brittleness	ASTM D2137	-40° C Pass
Dimensional Change	ASTM D1204	0.4%
Water Absorption	ASTM D471	0.7%
Ozone Resistance	ASTM D1149	Pass
Weather Resistance	ASTM G155	>20,000Kj/m ²
Permeance	ASTM E96	0.08 perms
Hydrostatic Resistance	ASTM D751	380 psi
Reflectivity (white)	ASTM C1549	0.76
Emissivity (white)	ASTM C1371	0.90
SRI (solar reflectance index)	ASTM E1980	94

Flex 45 TPO Plus membranes meet or exceed the requirements of ASTM 6878 Standard Specification for Thermoplastic Polyolefin (TPO) Based Sheet Roofing.

WARRANTY

The Flex 45 TPO Plus Roofing Membrane may receive the manufacturers standard five (5) year or optional ten (10) year or fifteen (15) year guarantee of watertightness.