

USP® FB EV-PLUS THERMOPLASTIC MEMBRANE

Description: USP® FB EV-Plus Thermoplastic Single Ply Membrane is a high-performance, white reflective, thermoplastic single ply membrane designed for fully adhered applications including multi-ply hybrid roofing with BUR/SBS roofs. The USP® FB EV-PLUS combines thermoplastic technology with Du Pont's premium Elvaloy® ketone-ethylene-ester (KEE) and is polyester reinforced plus a 5.5 oz polyester fleece backing. The result is an exceptional thermoplastic single ply membrane that demonstrates revolutionary waterproofing characteristics, and excellent chemical, fire and UV resistance. The fleece backing allows the membrane to be installed directly over most substrates with steep asphalt or an approved USP® cold adhesive.

Benefits and Uses:

- May be installed directly in hot asphalt or an approved USP cold adhesive making the membrane ideal for use in a multi-ply hybrid system with USP BUR or SBS modified bitumen sheet materials.
- Hot air welded seams are stronger and more reliable than adhesive applied seams.
- Excellent chemical, ozone and UV exposure.
- White reflective, SRI Value of 109 and meets LEED Sustainable Site Credit 7.2: Heat Island Effect: Roof 1 Point, Option 1. Criteria is that the LEED Credit is achieved by roofing materials having a Solar Reflectance Index³ (SRI) equal to or greater than the values in the table below for a minimum of 75% of the roof surface.
- Tested to perform to high wind conditions and Class A fire rated roof systems.
- Increased cold weather flexibility to -40°F.
- Available in .045, .060 and .080 thicknesses.

Application Guidelines: USP® FB EV-Plus Thermoplastic Single Ply Membrane is applied in hot roofing asphalt, USP® Modified Asphalt 150, USP® 100 FB EV-PLUS Single Ply Adhesive, USP® 200 Bonding Adhesive, USP® 300 WB PVC Single Ply Adhesive, USP® 400 Low VOC Bonding Adhesive, USP® Fleece Membrane Foam Adhesive or 3M® CR-20 Adhesive. All laps must be heat welded using hot air welding procedures.

Approvals: USP® FB EV-Plus Thermoplastic Elvaloy® based membranes meets or exceeds the requirements of ASTM D4434 Standard Specification for poly vinyl chloride (PVC) based sheet roofing. U.S. Ply products are listed or approved with Underwriters Laboratories (UL) and Factory Mutual (FM). Contact U.S. Ply, Inc. for specific/applicable codes.

Product Data: USP® FB EV-Plus Thermoplastic Single Ply Membrane (typical)

Product Name USP® FB EV-PLUS Thermoplastic (Fleece-Backed)	Item Code	Dimensions		Gross Coverage (Sq. ft.)	Weight (lbs)	Packaging # per Pallet
45 Mil FB EV-PLUS Thermoplastic 76"	FB-45-76-90	76"	90'	570	185 lbs	10 rolls
45 Mil FB EV-PLUS Thermoplastic 120"	FB-45-120-100	10'	100'	1000	325 lbs	10 rolls
60 Mil FB EV-PLUS Thermoplastic 76"	FB-60-76-90	76"	90'	570	245 lbs	10 rolls
60 Mil FB EV-PLUS Thermoplastic 120"	FB-60-120-90	10'	90'	900	387 lbs	10 rolls
80 Mil FB EV-PLUS Thermoplastic 76"	FB-80-76-75	76"	75'	475	270 lbs	10 rolls
80 Mil FB EV-PLUS Thermoplastic 120"	FB-80-120-75	10'	75'	750	428 lbs	10 rolls



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Physical Properties (ASTM D 4434):**Test Results**

Property	Test Method	Physical results by Membrane		
		.045"	.060"	.080"
Color		White	White	White
Thickness	D751	.045"	.060"	.080"
Thickness over scrim	D751	.024"	.033"	.038"
Weight	D751	5.2 oz/ft ²	6.9 oz/ft ²	9.1 oz/ft ²
Breaking Strength, lbf, (MD/XD)	D751	325 x 324 lbf/in	325 x 324 lbf/in	325 x 324 lbf/in
Tear Strength, lbf, (MD/XMD)	D751	89 x 109 lbf	89 x 109 lbf	89 x 109 lbf
Factory Seam Strength, lbf	D751	295 lbf	295 lbf	295 lbf
Elongation at Break, (%), (MD/XD)	D751	50% x 42%	50% x 42%	50% x 42%
Breaking Strength after Heat Aging (retained values)	D3045	90%	90%	90%
Elongation at Break after Heat Aging (retained values)	D3045	90%	90%	90%
Low Temperature Flexibility, max, °F (°C)	D2136	Pass @ -40°F (-40°C)	Pass @ -40°F (-40°C)	Pass @ -40°F (-40°C)
Static Puncture Resistance	D5602	Pass @ 33 lbs	Pass @ 33 lbs	Pass @ 33 lbs
Dynamic Puncture Resistance	D5635	Pass @ 20J	Pass @ 20J	Pass @ 20J
Permeance	E96	0.003 Perms	0.003 Perms	0.003 Perms
Dimensional Change, %, max	D1204	0.3%	0.3%	0.3%
Weight Change after Water Immersion	D570	1.2%	1.2%	1.2%
Accelerated Weathering	G155	Pass (No visible cracks)	Pass (No visible cracks)	Pass (No visible cracks)
Fungi Resistance	G21	Pass	Pass	Pass
Reflectivity	E903	.82	.811	.811
Emissivity	E903	.91	.919	.919
SRI	E903	109	109	109

All values given are approximate and are subject to change without notice. There is no implied or express warranty given through these values or statements, nor are there any assertions that the product purchased has been individually tested to conform to these standards. Testing is performed on a random basis by "in-house" and independent "third party" evaluation for the purpose of classification and or approval. Acceptance, purchase and selection of these products are the sole responsibility of the buyer or buyer's representative. We assume no responsibility for coverage, performance or injuries resulting from use. Liability, if any, is limited to replacement of the product. NO OTHER WARRANTY OR GUARANTEE OF ANY KIND IS MADE BY U.S. PLY, INC. EXPRESSED OR IMPLIED; STATUTORY, BY OPERATION OF LAW, OR OTHERWISE, INCLUDING MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

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