

DURO-FLEECE® 80 MIL MEMBRANE

Advantages:

Duro-Last® Duro-Fleece® 80 mil (DF80) membrane is an excellent choice for projects requiring a long lasting, energy efficient roofing membrane. The combination of fleece and the proven performance of Duro-Last roofing membrane results in an ideal product for use in adhered and mechanically attached applications over a wide variety of roof substrates. The complete line of Duro-Last custom prefabricated accessories is compatible with the DF80 membrane.

Description:

In addition to the fleece, DF80 membrane incorporates a weft insertion knitted scrim within PVC films to provide exceptional strength and waterproofing.

PVC Film - Proprietary thermoplastic PVC formulation of resins, plasticizers, stabilizers, biocides, flame retardants, and U.V. absorbents.

- PVC film above scrim – 41 mils

Scrim - An 18 x 9 polyester fabric construction composed of 840 x 1000 denier threads provides superior tear and puncture resistance. The polyester thread is treated to prevent wicking.

Fleece - The 3.8 ounce per square yard needle-punched polypropylene fleece provides excellent properties for adhering to, or mechanically attaching over, a variety of substrates. Each roll of membrane has one selvage edge where the fleece is held back 3 inches to provide for hot-air welding to the underlying membrane.

Total Membrane Thickness – 80 mils, nominal.

Overall Thickness (with Fleece) – 101 mils.

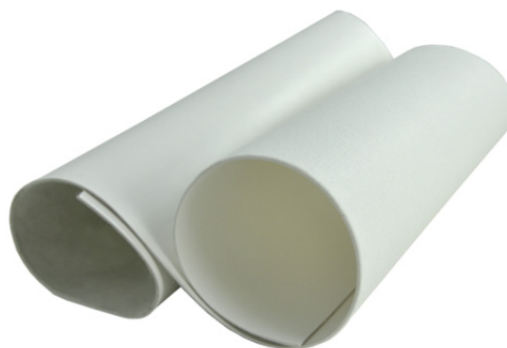
Weight – 0.53 lb. per sq. ft.

Color – White.

Available Configurations:

Roll Good – Dimensions

Product Name	Dimensions	Estimated Coverage	Roll Weight
DF80	10 ft. x 65 ft.	650 sq. ft.	345 lb.
	5 ft. x 65 ft.	325 sq. ft.	175 lb.



Energy Efficiency:

White DF80 membrane is an excellent product for complying with California Title 24, LEED and other energy efficiency programs requiring the use of a highly reflective roof membrane.

Cool Roof Rating Council (CRRC)¹

	Solar Reflectance		Thermal Emittance		Solar Reflective Index (SRI)	
	Initial	3-yr	Initial	3-yr	Initial	3-yr
White	0.85	Pending	0.89	Pending	108	Pending

¹ Duro-Last's CRRC Product ID: 0610.

LEED & LEED-EB Credits - White DF80 membrane alone can obtain 1 credit in either U.S. Green Building Council's LEED or LEED-EB programs. In combination with other design criteria the membrane may help attain many other credits.

LEED Credit Category	Duro-Last Attribute
Sustainable Sites Credit 7.2 Heat Island Effect: Roof	Solar Reflective Index SRI = 108
LEED-EB Credit Category	Duro-Last Attribute
Sustainable Sites Credit 7.2 Heat Island Effect: Roof	Solar Reflective Index SRI = 108

Warranty:

Duro-Fleece warranties are available for projects utilizing DF80 membrane. Contact Duro-Last for warranty details. **Consequential damage coverage is not available for Duro-Fleece installations.**

	Available Warranties			
10 Year	Material Only			
15 Year	NDL	High Wind	Hail	High Wind + Hail
	Material Only		Residential	
20 Year	NDL	High Wind	15 + 5 Material	
	Material Only		Residential	

Codes and Standards:

Underwriters Laboratories (R10128).

Storage:

Store rolls lengthwise on pallets. Use tarps to keep rolls dry.

Membrane Attachment:

Adhered – DF80 membrane may be adhered to a variety of properly prepared roof decks, walls, cover boards and insulations including structural concrete, gypsum, lightweight concrete, Duro-Guard® DensDeck® Prime Roof Board, Duro-Guard SECUROCK® Gypsum-Fiber Roof Board, and Duro-Guard ISO products. It may be adhered directly to an existing built-up roof (BUR) by using Duro-Fleece® Adhesive or splatter applied Duro-Grip® CR-20. Written approval from the Duro-Last Engineering Services Department is required prior to adhering to BUR. Refer to the Adhered Duro-Fleece Roofing System Specification for substrate preparation and acceptable adhesives.

Mechanically Fastened – DF80 membrane may be mechanically attached to a variety of roof deck and wall materials. An appropriate slip sheet or cover board may be required. Refer to the Duro-Last Mechanically Fastened Systems Specification for system requirements.

Physical Properties:

DF80 membrane has been subjected to the tests required by ASTM 4434 “Standard Specification for Poly (Vinyl Chloride) Sheet Roofing” and has been classified as a Type III, internally reinforced sheet with a fabric backing. The results of each test as well as typical values are listed below.

Physical Property	Test Method	ASTM 4434 Requirement	Result	Typical Value
Overall Thickness	ASTM D751	≥ 0.045 in.	PASS	80 mil, nominal (with fleece: 101 mils)
Thickness Over Scrim	ASTM D7635	≥ 0.016 in.	PASS	41 mils
Breaking Strength ¹	ASTM D751 Grab Method	≥ 200 lbf./in.	PASS	545 x 376 lbf./in. ¹
Elongation ¹	ASTM D751 Grab Method	≥ 15%	PASS	34% x 33% ¹
Seam Strength	ASTM D 751 Grab Method	≥ 282 lbf. (75% of Breaking Strength)	PASS	Pending ²
Tear Strength ¹	ASTM D751 Procedure B	≥ 45 lbf	PASS	70 x 211 lbf. ¹
Low Temp. Bend	ASTM D2136	Must Pass at – 40 °F	PASS	PASS
Heat Aging	ASTM D3045	Conditioned for 56 days in oven maintained at 176 °F	PASS	Pending ²
Accelerated Weathering	ASTM G154 (formerly G53)	5,000 hour total test time. Irradiance level of 0.68 W/m2-nm. Cycle: 8 hour at 145 °F, 4 hour condensation at 122 °F	PASS	Pending ²
Dimensional Stability ¹	ASTM D1204	Conditioned for 6 hours in oven maintained at 176 °F. Allowable change: ≤ 0.5%	PASS	-0.10% x -0.10% ¹
Water Absorption	ASTM D570	Immersed in water at 158 °F for 168 hours. Allowable weight change: ≤ 3%	PASS	0.10%
Static Puncture	ASTM D5602	≥ 33 lbf	PASS	PASS
Dynamic Puncture	ASTM 5635	≥ 14.7 ft-lbf (20 J)	PASS	PASS

¹ Typical values are shown for both machine and cross machine directions. The machine direction results are listed first.

² Values will be added upon completion of testing.

