

# DURO-FLEECE® COLORS 60-MIL MEMBRANE

**Advantages:**

Duro-Last® Duro-Fleece® Colors 60-Mil (DFC60) membrane is an excellent choice for projects requiring a long lasting 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 fastened applications over a wide variety of roof substrates. A complete line of custom-prefabricated accessories is available for the DFC60 membrane.

**Description:**

In addition to the fleece, DFC60 membrane incorporates a weft-inserted, knitted scrim within PVC films to provide exceptional strength and waterproofing.

**Duro-Fleece membranes must not be used with Duro-Last EV membranes.**

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

- PVC film above weft-inserted scrim – 31 mil

**Weft-Inserted Scrim** - An 18 x 9 polyester fabric construction with weft insertion, 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 fastening 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.

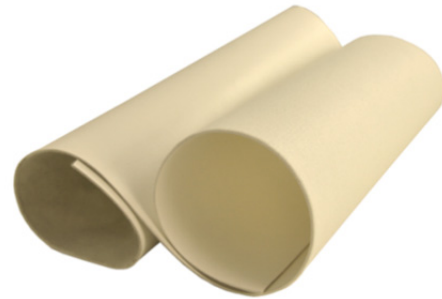
**Total Membrane Thickness** – 60 mil, nominal.

**Overall Thickness (with Fleece)** – 78 mil.

**Weight** – 0.39 lb. per square foot.

**Colors** – Same top and bottom surface color.

\* DFC60 is available in the following colors by special order. Contact sales department for more information.



**R-Value** – 0.1 ft<sup>2</sup>·°F·hr/Btu.

**Packaging** – DFC60 is supplied in the roll sizes shown below. A full pallet contains ten rolls.

**Roll Dimensions:**

Dimensions	Estimated Coverage <sup>1</sup>	Roll Weight
10 ft. x 100 ft.	975 sq. ft.	390 lb.
5 ft. x 100 ft.	475 sq. ft.	195 lb.

<sup>1</sup> Assuming 3-inch overlap

**Energy Efficiency:**

	CRRC ID	Solar Reflectance		Thermal Emittance		Solar Reflective Index (SRI)	
		Initial	3-yr	Initial	3-yr	Initial	3-yr
Blue	0610-0015	0.16	P <sup>1</sup>	0.89	P <sup>1</sup>	13	P <sup>1</sup>
Copper	0610-0016	0.19	P <sup>1</sup>	0.89	P <sup>1</sup>	17	P <sup>1</sup>
Charcoal	0610-0013	0.09	P <sup>1</sup>	0.86	P <sup>1</sup>	3	P <sup>1</sup>
Green	0610-0012	0.08	0.08	0.88	0.88	3	3
Light Gray	0610-0018	0.46	P <sup>1</sup>	0.89	P <sup>1</sup>	53	P <sup>1</sup>
Patina	0610-0019	0.34	P <sup>1</sup>	0.89	P <sup>1</sup>	37	P <sup>1</sup>
Light Tan	0610-0014	0.72	P <sup>1</sup>	0.85	P <sup>1</sup>	88	P <sup>1</sup>

P<sup>1</sup> Results pending.

**NSF/ANSI 347 GOLD CERTIFIED**

**Warranty:**

The following warranties are available for projects utilizing DFC60 membrane. Contact Duro-Last for warranty details. **Consequential damage coverage is not available for Duro-Fleece installations.**

Available Warranties			
Supreme	Not applicable for this product		
Ultra	15-Year NDH High Wind Warranty	20-Year NDH High Wind Warranty	25-Year NDH High Wind Warranty
Basic	15-Year NDH Warranty	20-Year NDH Warranty	25-Year NDH Warranty
Residential	15-Year Residential Material Limited Warranty		20-Year Residential Material Limited Warranty

**Codes and Standards:**

Underwriters Laboratories (US & Canada), UL Evaluation Report (ER10128), FM Approvals, Canadian Construction Materials Centre (CCMC 14011-L), State of Florida, Miami-Dade County, Texas Department of Insurance.

**Storage:**

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

**Membrane Attachment:**

**Adhered** – DFC60 membrane may be adhered to a variety of roof decks, walls, cover boards and insulations. It may be adhered directly to an existing built-up roof (BUR) by using Duro-Fleece Membrane Adhesive or splatter-applied Duro-Grip® CR-20. Adhesion pull tests are required prior to adhering to BUR. The tests must be performed on a 1 x 1-foot area and receive minimum values of 150 pounds per square foot. Refer to the Adhered Duro-Fleece Roofing System Specification for substrate preparation, acceptable adhesives and system requirements.

**Mechanically Fastened** – DFC60 membrane may be mechanically fastened to a variety of roof deck and wall materials. An appropriate slip sheet or cover board may be required. Refer to the Roll Good Mechanically Fastened Roofing System Specification for system requirements.

**Physical Properties:**

DFC60 membrane has been subjected to the tests required by ASTM D4434 “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 are listed below. ASTM’s Overall Thickness requirements for the membrane are plus or minus 10% (nominal) of the listed Typical Value.

Physical Property	Test Method	ASTM D4434 Requirement	Result	Typical Value
Overall Thickness	ASTM D751	≥ 0.054 and ≤ 0.066 in. (≥ 54 and ≤ 66 mil)	PASS	0.060 in. (60 mil), nominal (With fleece: 78 mil)
Thickness Over Scrim	ASTM D7635	≥ 0.016 in.	PASS	0.031 in. (31 mil)
Breaking Strength <sup>1</sup>	ASTM D751 Grab Method	≥ 200 lbf./in.	PASS	554 x 408 lbf./in.
Elongation <sup>1</sup>	ASTM D751 Grab Method	≥ 15%	PASS	34% x 85%
Seam Strength	ASTM D751 Grab Method	≥ 415 lbf. (75% of Breaking Strength)	PASS	437 lbf.
Tear Strength <sup>1</sup>	ASTM D751 Procedure B	≥ 45 lbf.	PASS	50 x 200 lbf.
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	PASS
Accelerated Weathering	ASTM G155	10,000 hours total test time. Irradiance level of 0.35 W/m <sup>2</sup> -340nm. Cycle: 102 minutes light, 18 minutes light + H <sub>2</sub> O spray, 63±2.5° C black panel, 30±5% RH	PASS	PASS
Dimensional Stability <sup>1</sup>	ASTM D1204	Conditioned for 6 hours in oven maintained at 176° F. Allowable change: ≤ 0.5%	PASS	0.10% x 0.00%
Water Absorption	ASTM D570	Immersed in water at 158° F for 168 hours. Allowable weight change: ≤ 3%	PASS	2.3%
Static Puncture	ASTM D5602	≥ 33 lbf.	PASS	≥ 33 lbf.
Dynamic Puncture	ASTM D5635	≥ 14.7 ft-lbf.	PASS	≥ 14.7 ft-lbf.

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

**Additional Tests**

Fungi Resistance	ASTM G21	No Sustained Growth or Discoloration
Moisture Vapor Transmission	ASTM E96, Proc. B, Method A	< 0.35 U.S. perms

