

# DURO-TUFF® COLORS 50-MIL MEMBRANE

## Advantages:

Duro-Last® Duro-Tuff® Colors 50-Mil (DTC50) membrane is an excellent choice for low-slope roof projects requiring a long lasting roofing membrane. A complete line of custom prefabricated accessories is available for the DTC50 membrane.

## Description:

Duro-Tuff Colors membrane incorporates a weft insertion knitted scrim within PVC films to provide exceptional strength and waterproofing.

**Duro-Tuff 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 scrim – 26 mil

**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.

**Total Thickness** – 50 mil, nominal.

**Weight** – 0.28 lb. per square foot.

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

\* DTC50 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** – DTC50 is supplied in the roll sizes shown below. A full pallet contains ten rolls.

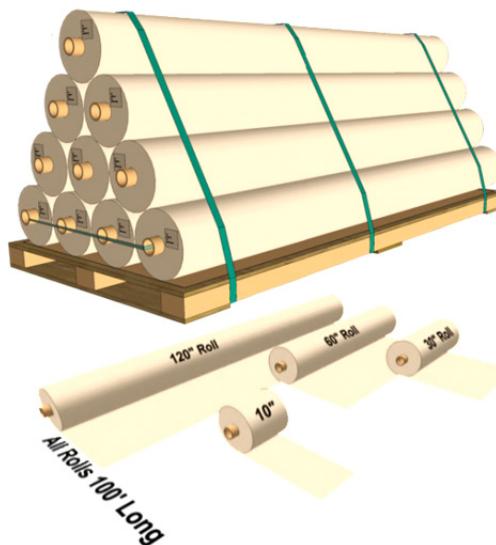
## Roll Dimensions:

Dimensions	Estimated Coverage		Roll Weight
	6" Overlap <sup>1</sup>	4" Overlap <sup>2</sup>	
120 in. x 100 ft.	950 sq. ft.	967 sq. ft.	280 lb.
60 in. x 100 ft.	450 sq. ft.	467 sq. ft.	140 lb.
30 in. x 100 ft.	200 sq. ft.	217 sq. ft.	70 lb.
10 in. x 100 ft.	Stripping		24 lb.

<sup>1</sup> 6 inch overlap and use of Duro-Last Poly or Cleat Plates.

<sup>2</sup> 4 inch overlap and use of Duro-Last Oval Plates.

**Overlap Line** – A blue line, 6 inches from one edge of the sheet, is factory applied to the top of the sheet to assist in maintaining proper overlap between sheets.



## Seam Plate and Fastener Placement Guides –

“X”s are placed at 6-inch intervals along one edge of the sheet to assist in maintaining proper spacing between fasteners. Install fasteners so that the outside edge of the seam plate is flush with the edge of the sheet.

**“T-Lap” Patches** – A patch, with rounded corners, is required at all lap areas where 3 or more layers of membrane intersect (“T-Lap”). The minimum size of the patch is 4 x 4 inches or 4-inch diameter. Patches can be made of either DT or DL membrane of any thickness. Refer to Detail Drawing DT1066.

## Energy Efficiency:

	Solar Reflectance		Thermal Emittance		Solar Reflective Index (SRI)	
	Initial	3-yr	Initial	3-yr	Initial	3-yr
Blue	0.14	P <sup>1</sup>	0.89	P <sup>1</sup>	P <sup>1</sup>	P <sup>1</sup>
Copper	0.18	P <sup>1</sup>	0.89	P <sup>1</sup>	P <sup>1</sup>	P <sup>1</sup>
Charcoal	0.08	P <sup>1</sup>	0.89	P <sup>1</sup>	P <sup>1</sup>	P <sup>1</sup>
Green	0.07	P <sup>1</sup>	0.89	P <sup>1</sup>	P <sup>1</sup>	P <sup>1</sup>
Light Gray	0.43	P <sup>1</sup>	0.89	P <sup>1</sup>	P <sup>1</sup>	P <sup>1</sup>
Patina	0.31	P <sup>1</sup>	0.89	P <sup>1</sup>	P <sup>1</sup>	P <sup>1</sup>
Light Tan	0.71	P <sup>1</sup>	0.89	P <sup>1</sup>	P <sup>1</sup>	P <sup>1</sup>

P<sup>1</sup> 3-Year aged results pending.

## Warranty:

The following warranties are available for projects utilizing DTC50 membrane. Contact Duro-Last for warranty details. **Consequential damage coverage is not available for Duro-Tuff Installations.**

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

**Codes and Standards:**

Underwriters Laboratories.

**Storage:**

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

**Membrane Attachment:**

**Mechanically Fastened** – DTC50 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-Tuff Mechanically Fastened System Specification for system requirements.

**Duro-Bond® System** – The Duro-Bond system (inductive weld) may be used to attach DTC50 membrane. Refer to the Duro-Last Duro-Bond System Specification for system requirements.

**Adhered** – DTC50 membrane may be adhered to a variety of properly prepared roof decks, walls, cover boards and insulations including structural concrete, Duro-Guard® DensDeck® Prime Roof Board, Duro-Guard SECUROCK® Gypsum-Fiber Roof Board, and Duro-Guard ISO products. Refer to the Duro-Last Adhered Systems Specification for system requirements.

**Physical Properties:**

DTC50 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. The results of each test are listed below.

Physical Property	Test Method	ASTM 4434 Requirement for Type III Sheet	Typical Value
Overall Thickness	ASTM D751	≥ 0.045 in.	0.050 in. (50 mil), nominal
Thickness Over Scrim	ASTM D7635	≥ 0.016 in.	0.026 in. (26 mil)
Breaking Strength <sup>1</sup>	ASTM D751 Grab Method	≥ 200 lbf./in.	423 x 278 lbf./in.
Elongation <sup>1</sup>	ASTM D751 Grab Method	≥ 15%	31% x 30%
Seam Strength	ASTM D751 Grab Method	≥ 317 lbf. (75% of Breaking Strength)	423 lbf.
Tear Strength <sup>1</sup>	ASTM D751 Procedure B	≥ 45 lbf.	90 x 143 lbf.
Low Temp. Bend	ASTM D2136	Must Pass at -40° F.	PASS
Heat Aging	ASTM D3045	Conditioned for 56 days in oven maintained at 176° F.	PASS
Accelerated Weathering	ASTM G154 (formerly G53)	5,000 hours total test time. Irradiance level of 0.68 W/m <sup>2</sup> -nm. Cycle: 8 hours at 145° F, 4 hours condensation at 122° F.	PASS
Dimensional Stability <sup>1</sup>	ASTM D1204	Conditioned for 6 hours in oven maintained at 176° F. Allowable change: ≤ 0.5%	0.20% x 0.10%
Water Absorption	ASTM D570	Immersed in water at 158° F for 168 hours. Allowable weight change: ≤ 3%	2.60%
Static Puncture	ASTM D5602	≥ 33 lbf.	≥ 33 lbf.
Dynamic Puncture	ASTM 5635	≥ 14.7 ft-lbf. (20 J)	≥ 14.7 ft-lbf. (20 J)

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

