

# DURO-TUFF® COLORS 60-MIL MEMBRANE

**Advantages:**

Duro-Last® Duro-Tuff® Colors 60-Mil (DTC60) 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 DTC60 membrane.

**Description:**

Duro-Tuff Colors membrane incorporates a weft-inserted, 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 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.

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

**Weight** – 0.35 lb. per square foot.

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

\* DTC60 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** – DTC60 is supplied in the roll sizes shown below. A full pallet contains ten rolls.

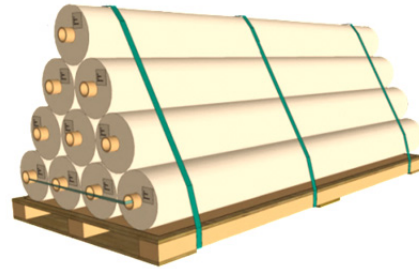
**Roll Dimensions:**

| 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.             | 350 lb.     |
| 60 in. x 100 ft.  | 450 sq. ft.             | 467 sq. ft.             | 175 lb.     |
| 30 in. x 100 ft.  | 200 sq. ft.             | 217 sq. ft.             | 88 lb.      |
| 10 in. x 100 ft.  | Stripping               |                         | 29 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 black 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 RG1066.

**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 DTC60 membrane. Contact Duro-Last for warranty details. **Consequential damage coverage is not available for Duro-Tuff Installations.**

| Available Warranties |   |                                |   |
|----------------------|---|--------------------------------|---|
| <b>Supreme</b>       | Not applicable for this product               |                                |   |
| <b>Ultra</b>         | 15-Year NDH High Wind Warranty                | 20-Year NDH High Wind Warranty | 25-Year NDH High Wind Warranty                |
| <b>Basic</b>         | 15-Year NDH Warranty                          | 20-Year NDH Warranty           | 25-Year NDH Warranty                          |
| <b>Residential</b>   | 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 14012-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:**

**Mechanically Fastened** – DTC60 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.

**Duro-Bond® Roofing System** – The Duro-Bond Roofing System (induction weld) may be used to attach DTC60 membrane. Refer to the Duro-Bond Roofing System Specification for system requirements.

**Adhered** – DTC60 membrane may be adhered to a variety of properly prepared roof decks, walls, cover boards and insulations. Refer to the Adhered Roofing System Specification for system requirements.

**Physical Properties:**

DTC60 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. 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.<br>(≥ 54 and ≤ 66 mil)   | PASS   | 0.060 in. (60 mil), nominal |
| 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   | 437 x 304 lbf./in.          |
| Elongation <sup>1</sup>            | ASTM D751 Grab Method | ≥ 15%  | PASS   | 29% x 30%                   |
| Seam Strength                      | ASTM D751 Grab Method | ≥ 327 lbf.<br>(75% of Breaking Strength.)  | PASS   | 463 lbf.                    |
| Tear Strength <sup>1</sup>         | ASTM D751 Procedure B | ≥ 45 lbf.  | PASS   | 78 x 190 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.<br>Irradiance level of 0.35 W/m <sup>2</sup> -340nm.<br>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.<br>Allowable change: ≤ 0.5%  | PASS   | 0.30% x 0.10%               |
| Water Absorption                   | ASTM D570             | Immersed in water at 158° F for 168 hours.<br>Allowable weight change: ≤ 3%  | PASS   | 2.29%                       |
| Static Puncture                    | ASTM D5602            | ≥ 33 lbf.  | PASS   | ≥ 33 lbf.                   |
| Dynamic Puncture                   | ASTM D5635            | ≥ 14.7 ft-lbf. (20 J)  | PASS   | ≥ 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.

**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                    |

