

# DURO-LAST X™ 50-MIL MEMBRANE



**Advantages:**

Duro-Last X™ 50 mil (DLX™50) is an excellent choice for contractors seeking the convenience of roll goods custom-cut to their desired length. DLX50 can be custom-cut up to 200 feet in length for improved installation efficiency. Standard roll sizes of 100 feet are also available.

The DLX50 formulation is identical to that of the Duro-Last® membrane revered for its long-lasting, energy efficient qualities. DLX50 is manufactured using a different process. This results in a smooth, matte finish, as opposed to the textured and glossy finish of the Duro-Last membrane.

A complete line of custom-fabricated accessories and parapets are available for use with DLX50. These products are made from the Duro-Last membrane and will have a glossier initial appearance than DLX.

**Description:**

DLX50 is composed of PVC film laminated to both sides of a reinforcement fabric (weft-inserted scrim).

**DLX 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 – 28 mil, nominal

**Weft-Inserted Scrim** – An 18 x 14 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** – 50 mil, nominal.

**Weight** – 0.31 lb. per square foot.

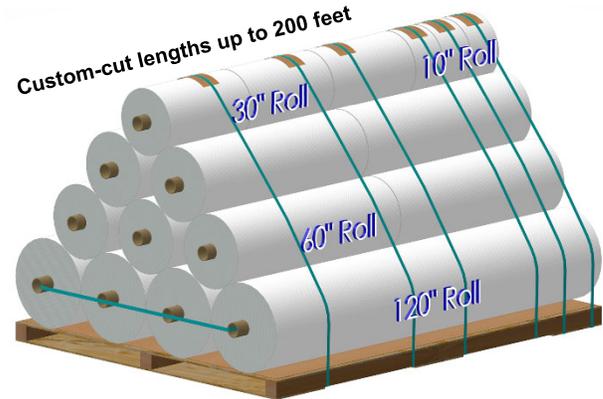
**Color** – White.

**Surface Finish** – Matte.

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

**Packaging** – DLX50 is either custom-cut or supplied in the roll sizes shown in the adjacent table. A full pallet contains ten rolls.

**Custom-Cut Rolls** – Custom-cut rolls are available in increments of 12 inches. Custom-cut lengths will be manufactured with a tolerance of up to plus 6 inches. The material price will be determined by the length of roll specified.



**Roll Dimensions**

Item Number	Dimensions	Approximate Coverage		Approx. Weight
		6" Overlap <sup>1</sup>	4" Overlap <sup>2</sup>	
50852	120 in. x 100 ft.	950 sq. ft.	967 sq. ft.	310 lb.
50855	60 in. x 100 ft.	450 sq. ft.	467 sq. ft.	155 lb.
50858	30 in. x 100 ft.	200 sq. ft.	217 sq. ft.	78 lb.
50861	10 in. x 100 ft.	Stripping		26 lb.
Custom-cut lengths up to 200 feet.				

<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 Metal Plates.

**Overlap Line** – A 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.

**Energy Efficiency:**

White DLX50 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)**

	CRRC ID	Solar Reflectance		Thermal Emittance		Solar Reflective Index (SRI)	
		Initial	3-yr	Initial	3-yr	Initial	3-yr
<b>White</b>	0610-0020	0.87	0.76	0.89	0.89	110	94

**LEED-NC & LEED-EB Credits** – White DLX50 alone can obtain 1 credit in either U.S. Green Building Council’s LEED-NC or LEED-EB programs. In combination with other design criteria the membrane may help attain other credits.

LEED-NC Credit Category	Duro-Last Attribute
Sustainable Sites Heat Island Reduction	Solar Reflective Index (SRI) = 110

LEED-EB Credit Category	Duro-Last Attribute
Sustainable Sites Heat Island Reduction	Solar Reflective Index (SRI) = 110

**Warranty:**

The following warranties are available for projects utilizing DLX50. Contact Duro-Last for warranty details.

Available Warranties				
<b>Supreme</b>	15-Year NDL Warranty		20-Year NDL Warranty – 15 Years Consequential Damages And 5 Years Material	20-Year NDL Warranty – 15 Years Consequential Damages And 5 Years Material and Labor
<b>Ultra</b>	15-Year NDL Hail Warranty <sup>1</sup>	15-Year NDL Hail & High Wind Warranty <sup>1</sup>	15-Year NDL High Wind Warranty <sup>1</sup>	20-Year NDL High Wind Warranty <sup>1</sup>
<b>Basic</b>	15-Year NDL Warranty <sup>1</sup>		20-Year NDL Warranty <sup>1</sup>	
<b>Residential</b>	15-Year Residential Material Limited Warranty <sup>1</sup>		20-Year Residential Material Limited Warranty <sup>1</sup>	

<sup>1</sup> Excludes consequential damage coverage.

**Codes and Standards:**

Underwriters Laboratories (US & Canada), UL Evaluation Report (ER10128), FM Approvals, Canadian Construction Materials Centre (CCMC 13299-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** – DLX50 may be mechanically fastened to a variety of roof deck and wall materials. An appropriate slip sheet, insulation or cover board may be required. Refer to the Duro-Last Roll Good Mechanically Fastened Roofing System Specification for system requirements.

**Induction welded** – Induction welding may be used to attach DLX50. An appropriate slip sheet, insulation or cover board may be required. Refer to the Duro-Bond® Induction Weld Roofing System Specification for system requirements.

**Adhered** – DLX50 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:**

DLX50 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	≥ 0.045 and ≤ 0.055 in. (≥ 45 and ≤ 55 mil)	PASS	0.050 in. (50 mil), nominal
Thickness Over Scrim	ASTM D7635	≥ 0.016 in.	PASS	0.028 in. (28 mil)
Breaking Strength <sup>1</sup>	ASTM D751 Grab Method	≥ 275 lbf./in.	PASS	485 x 402 lbf./in.
Elongation <sup>1</sup>	ASTM D751 Grab Method	≥ 15%	PASS	31% x 22%
Seam Strength	ASTM D751 Grab Method	≥ 301 lbf. (75% of Breaking Strength.)	PASS	480 lbf.
Tear Strength <sup>1</sup>	ASTM D751 Procedure B	≥ 45 lbf.	PASS	124 x 198 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 Aging	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	-0.30% x -0.45%
Water Absorption	ASTM D570	Immersed in water at 158° F for 168 hours. Allowable weight change: ≤ 3%	PASS	2.8%
Static Puncture	ASTM D5602	≥ 33 lbf.	PASS	PASS
Dynamic Puncture	ASTM D5635	≥ 14.7 ft-lbf. (20 J)	PASS	PASS

<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

