

# DURO-LAST® EV 50-MIL MEMBRANE

### Advantages:

Duro-Last® EV 50-Mil (EV50) membrane is an excellent choice for low-slope roof projects requiring a long lasting, energy efficient roofing membrane. The inclusion of DuPont™ Elvaloy® KEE (Ketone Ethylene Ester) provides Duro-Last EV with superior physical properties and performance characteristics.

### Description:

Duro-Last EV membrane incorporates a weft insertion knitted scrim within KEE-containing films to provide exceptional strength and waterproofing.

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

**KEE-containing Film** - Proprietary thermoplastic KEE-containing 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.

**Color** – Top surface: white. Bottom surface: white.

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

**Packaging** – EV50 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.

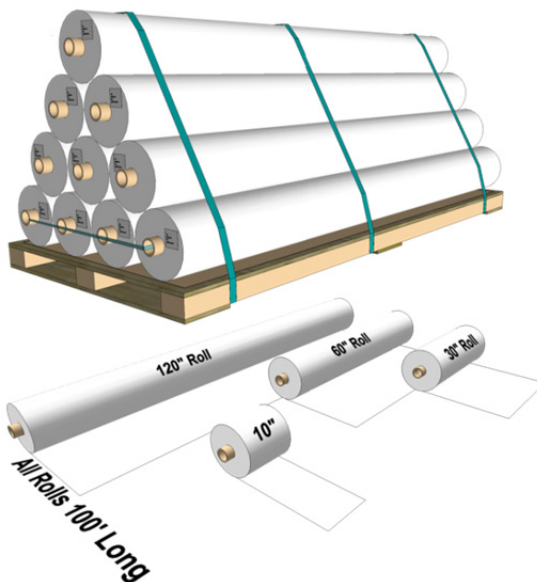
<sup>1</sup> 6 inch overlap and use of Duro-Last Poly or Cleat Plates.

<sup>2</sup> 4 inch overlap and use of Duro-Last Oval Metal 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 EV50 or EV60 membrane.

### Energy Efficiency:

	Solar Reflectance		Thermal Emittance		Solar Reflective Index (SRI)	
	Initial	3-yr	Initial	3-yr	Initial	3-yr
<b>White</b>	0.85	P <sup>1</sup>	0.90	P <sup>2</sup>	107	P <sup>1</sup>

<sup>1</sup> 3-year aged results pending.

### Warranty:

The following warranties are available for projects utilizing EV50 membrane. Contact Duro-Last for warranty details. **Consequential damage coverage is not available for Duro-Last EV installations.**

Available Warranties				
<b>10 Year</b>	Material Only			
<b>15 Year</b>	<b>NDL</b>	High Wind	Hail	High Wind + Hail
	Material Only		Residential	
<b>20 Year</b>	<b>NDL</b>	High Wind		Pro-Rated
	Material Only		Residential	

**Codes and Standards:**

Underwriters Laboratories, FM Approvals.

**Storage:**

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

**Membrane Attachment:**

**Mechanically Fastened** – EV50 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 System Specification for system requirements.

**Duro-Bond® System** – The Duro-Bond system (inductive weld) may be used to attach EV50 membrane. Refer to the Duro-Last Duro-Bond System Specification for system requirements.

**Adhered** – EV50 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:**

EV50 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.	458 x 282 lbf./in.
Elongation <sup>1</sup>	ASTM D751 Grab Method	≥ 15%	33% x 27%
Seam Strength	ASTM D751 Grab Method	≥ 343 lbf. (75% of Breaking Strength.)	458 lbf.
Tear Strength <sup>1</sup>	ASTM D751 Procedure B	≥ 45 lbf.	67 x 152 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.	Pending <sup>2</sup>
Accelerated Weathering	ASTM G154 (formerly G53)	5,000 hours total test time. Irradiance level of 0.68 W/m2-nm. Cycle: 8 hours at 145° F, 4 hours condensation at 122° F.	Pending <sup>2</sup>
Dimensional Stability <sup>1</sup>	ASTM D1204	Conditioned for 6 hours in oven maintained at 176° F. Allowable change: ≤ 0.5%	0.14% x 0.05%
Water Absorption	ASTM D570	Immersed in water at 158° F for 168 hours. Allowable weight change: ≤ 3%	Pending <sup>2</sup>
Static Puncture	ASTM D5602	≥ 33 lbf.	PASS
Dynamic Puncture	ASTM 5635	≥ 14.7 ft-lbf. (20 J)	PASS

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

<sup>2</sup> Values will be added upon completion of testing.

