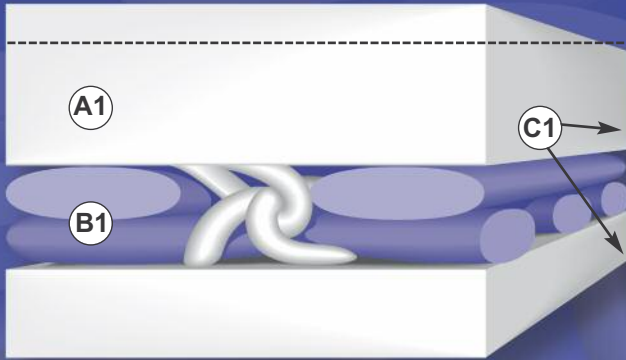


# Single-Ply Roofing Membranes: Analyzing Performance And Thickness

Many single-ply roofing manufacturers promote the idea that when it comes to performance, “thicker” means “better.” However, the truth is that roofing system performance is based on several factors, including product composition, reinforcement, and thickness.

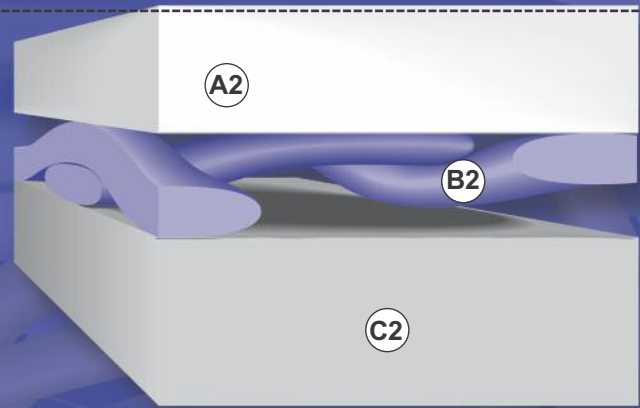
## 50-mil Duro-Last® Membrane

ASTM D4434 Type III PVC Roof System



## Typical 60-mil Competitive Membrane

ASTM D4434 Type III PVC Roof System



<b>A1</b> Above scrim thickness: 28 mils (exceeds ASTM minimum of 16 mils for Type II, III, and IV PVC membranes)	<b>A2</b> Above scrim thickness: 22 mils
<b>B1</b> Scrim: 14 x 18 threads/inch; weft-inserted	<b>B2</b> Scrim: 10 x 10 threads/inch; woven
Membrane breaking strength: 366 x 472 lbf. (ASTM D751)	Membrane breaking strength: 300 lbf. (ASTM D751)
<b>C1</b> Same PVC formulation above and below scrim	<b>C2</b> Filler material added below scrim to increase membrane thickness
Duro-Last membrane is white from top to bottom, delivering superior energy efficiency	Non-white bottom layer decreases energy efficiency

*Illustrations not to scale. Scrim layer shown in color to clarify illustration.*

### Strength Is In The Scrim

The Duro-Last 50-mil membrane has polymer thickness over the scrim equal to or greater than other typical 60-mil thermoplastic roofing systems. Additionally, the Duro-Last 50-mil system outperforms these 60-mil products in strength performance characteristics. The difference: the

reinforcement scrim. Ours is a weft-insertion scrim with a 14 x 18 threads-per-inch density – among the highest in the industry.

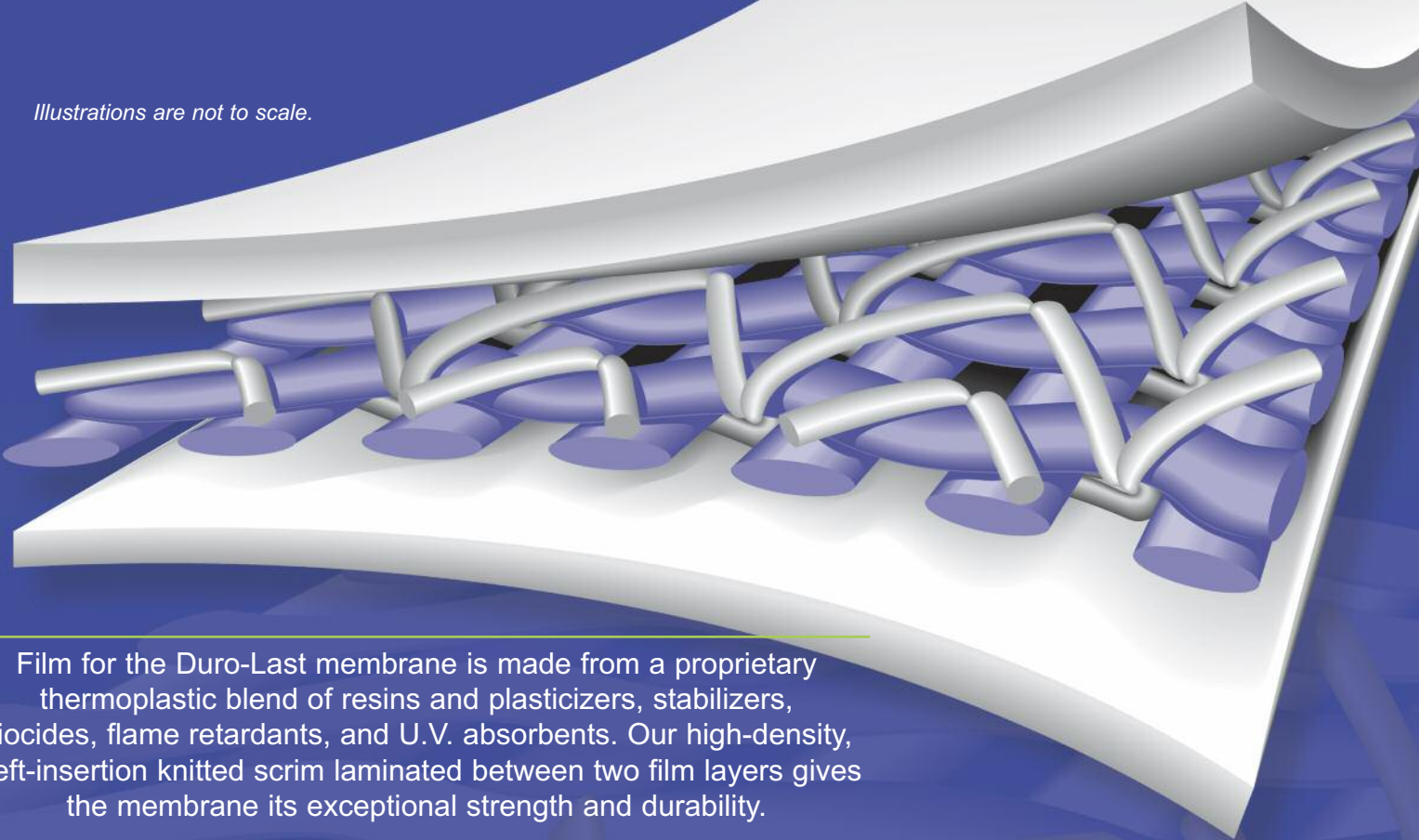
### Thickness Where It Counts

The above-scrim thickness of our 50-mil membrane – 28 mils – far exceeds not only the ASTM

minimum standard of 16 mils for Type III membranes, but also the above-scrim thickness typically provided by our competitors' systems. This means that the Duro-Last roofing system provides protection where your building needs it most: the exposed surface of the membrane.

*(Continued on other side)*

Illustrations are not to scale.



Film for the Duro-Last membrane is made from a proprietary thermoplastic blend of resins and plasticizers, stabilizers, biocides, flame retardants, and U.V. absorbers. Our high-density, weft-insertion knitted scrim laminated between two film layers gives the membrane its exceptional strength and durability.

### True Performance

To increase membrane thickness, some manufacturers add more material to the bottom film layer and little to the exposed layer. Increasing thickness does not directly increase membrane performance. Rather, performance is a balance between film formulation, membrane thickness, and reinforcement.

### Here's how a single-ply roofing system protects buildings:

- **Film formulation** determines the flexibility of the membrane as well as its ability to resist crazing and cracking over time, and protect against ultraviolet (UV) radiation.
- **Membrane thickness** provides protection from water, snow, and ice elements.

- **Reinforcement** provided by the scrim layer is the source of the membrane's strength. The scrim protects against natural elements and from human activity that causes punctures and tears. Reinforcement also provides dimensional stability to the membrane and strength against building movement.

If you buy or specify single-ply roofing systems, your decision should be based on membrane performance, not thickness alone. With over 30 years of delivering leak-proof protection for buildings of all types across North America, the durable, precision-fabricated Duro-Last roofing system is the right choice for your roofing project.



**DURO-LAST**  
THE WORLD'S BEST ROOF.



**Duro-Last: The Proven Performer®**

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The Duro-Last Roofing System® is proudly manufactured in the United States of America.

**800-248-0280**  
[www.duro-last.com](http://www.duro-last.com)