



## **EVOLVE® LUMBER**

EVOLVE lumber is a solid, non-hollow, foamed recycled product manufactured from recycled Type 2 High Density Polyethylene (ReHDPE), with no fillers. The composite mixture of the end product is at least 90% ReHDPE, utilizing both post-consumer and post-industrial materials. The plastic is impregnated with colorant and UVI to help protect the material from physical degradation, flaking and color fade.

EVOLVE lumber is a non-commingled "pulltruded" product. This promotes a network of complete molecular linkage. EVOLVE lumber is able to sustain normal loading at temperatures ranging from -40°F to 110°F with proper installation.

EVOLVE lumber is manufactured using only heavy-metal free colorants, to be environmentally friendly, and to meet current and future federal standards.

## **PERMA-POLY® SHEETING**

Perma-Poly sheet material is manufactured from a mixture of virgin and recycled Type 2 High Density Polyethylene (HDPE & ReHDPE). The composite mixture of the end product is at least 50% ReHDPE, utilizing both post-consumer and post-industrial materials. The plastic is impregnated with colorant and UVI to help protect the material from physical degradation, flaking and color fade.

Perma-Poly sheet is a non-commingled, extruded product. This promotes a network of complete molecular linkage. Perma-Poly sheet is able to sustain normal loadings at temperatures ranging from -40°F to 110°F with proper installation.

Perma-Poly sheet is manufactured using only heavy-metal free colorants, to be environmentally friendly, and to meet current and future federal standards.

# MATERIAL COMPOSITION & TESTING DATA



## TESTING DATA

ASTM standards listed below are based on RENEW™ Plastics 1 1/2" x 5 1/2" profile in weatherwood color. An average of up to 16 test samples was used.

TEST TYPE	NOTE	ASTM STANDARD	AVERAGE RESULTS		STANDARD DEVIATION		
Density / Specific Gravity (g/cc)	I	D6111-97	0.68559		0.00434		
Compression	I	D6108-97	Secant Modulus (psi)				
			92,249		3,328		
			Stress at 3% Strain (psi)				
			1,734		46		
Flexure	II	D6109-97	Secant Modulus (psi)				
			112,000		1,560		
			Stress at 3% Strain (psi)				
			2,358		29.4		
Fastener Pullout Failure Load (lbs.)	I	D6117-97	452		5		
Fastener Shear Maximum Load (lbs.)	I	D6117-97	2,464		67		
Thermal Expansion (in/in/°F)	II	D6341-98	4.965 x 10 <sup>-5</sup>		2.057 x 10 <sup>-6</sup>		
Friction Coefficient (Smooth Surface)	II	D2394-83	Material	Dry		Wet	
				Static	Sliding	Static	Sliding
			Leather	0.27	0.22	0.32	0.29
Rubber	0.55	0.46	0.70	0.67			
Flame Spread	II	E108 - Modified per D6662	PASSED				

Notes:

- I Testing conducted by Battelle of Columbus, OH
- II Warnock Hersey Certified for ASTM D6662-01 by Intertek Testing Services NA Ltd. of Coquitlam, BC.



For further information on Intertek Testing Services NA Ltd. and the Warnock Hersey certification, please contact ITS at: [www.ETLSemko.com](http://www.ETLSemko.com)

For further ASTM test standard information and their processes please contact ASTM at: [www.astm.org](http://www.astm.org)