

# PHYSICAL AND MECHANICAL PROPERTIES FOR TREX TRANSCEND® AND TREX ENHANCE™

	TEST METHOD	VALUES	
Flame Spread (a)	ASTM E84	60	
Typical Trex® Values for Coefficient of Thermal Expansion/Contraction (36" (91.4 cm) long samples)			
Thermal	Width	35.2 x 10 <sup>-6</sup> to 42.7 x 10 <sup>-6</sup> (inch/inch/°F) 644 x 10 <sup>-6</sup> to 776 x 10 <sup>-6</sup> (length/length/°C)	
	Length	16.1 x 10 <sup>-6</sup> to 19.2 x 10 <sup>-6</sup> (inch/inch/°F) 297 x 10 <sup>-6</sup> to 356 x 10 <sup>-6</sup> (length/length/°C)	
Moisture	Typical Trex Values for Long-Term Water Immersion	Typical Trex Values for Constant High Humidity	
	(36"/91.4 cm long samples)	(6"/15.2 cm long samples)	
	Width ~3%	~1%	
Nail Withdrawal (c)	ASTM D1761	163 lbs/in (1.12 Mpa)	
Screw Withdrawal (c)	ASTM D1761	558 lbs/in (3.85 Mpa)	
Fungus Resistance (White & Brown Rot)	ASTM D1413	Rating = No Decay	
Termite Resistance (d)	AWPAE1-72	Rating = 9.6	
		ULTIMATE (TYPICAL) VALUES	DESIGN VALUES
Compression Parallel (e)(f)	ASTM D198	836 psi ( 5.76 Mpa)	540 psi (3.72 Mpa)
Compression Perpendicular (e)(g)	ASTM D143	861 psi (5.94 Mpa)	540 psi (3.72 Mpa)
Tensile Strength (e)	ASTM D198	1562 psi ( 10.77 Mpa)	500 psi (3.45 Mpa)
Shear Strength (e)	ASTM D143	559 psi ( 3.85 Mpa)	360 psi (2.48 Mpa)
Modulus of Elasticity (e)	ASTM D4761	412,000 psi (2840.64 Mpa)	200,000 psi (1378.95 Mpa)
Thermal Conductivity	ASTM C177	1.57 BTU-in/hr-ft @85°F (.0023 W/cm/°C)	

**NOTES:**

- (a) Corresponding Smoke Developed Index is 285.
- (b) Values shown are for reference only. These values should not be used to calculate gapping for Trex. Follow Trex installation literature for proper width-to-width and end-to-end gapping information.
- (c) 8d common wire nail. No. 10 wood screw.
- (d) Material weight loss was 0%.
- (e) Ultimate strength values are not meant for design analysis. Testing performed on a 1" x 5.5" (2.5 cm x 14 cm) cross section. Design values are for temperatures up to 130°F (54°C).
- (f) Compressive strength parallel to the length.
- (g) Compressive strength perpendicular to length.