

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



| | TEST METHOD | VALUES | |
|---|---|--|------------------------------|
| Flame Spread (a) | ASTM E84 | 70 (Transcend) / 75 (Enhance) | |
| Typical Trex® Values for Coefficient of Thermal Expansion/Contraction (36" (91.4 cm) long samples) | | | |
| Thermal | Width | 35.2 x 10 ⁻⁶ to 42.7 x 10 ⁻⁶ (inch/inch/°F) 644 x 10 ⁻⁶ to 776 x 10 ⁻⁶ (length/length/°C) | |
| | Length | 16.1 x 10 ⁻⁶ to 19.2 x 10 ⁻⁶ (inch/inch/°F) 297 x 10 ⁻⁶ to 356 x 10 ⁻⁶ (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) Width ~3% | (6"/15.2 cm long samples) ~1% | |
| Nail Withdrawal | ASTM D1761 | 163 lbs/in (1.12 Mpa) | |
| Screw Withdrawal | ASTM D1761 | 558 lbs/in (3.85 Mpa) | |
| Fungus Resistance (White & Brown Rot) | ASTM D1413 | Rating = No Decay | |
| Termite Resistance (c) | AWPAE1-72 | Rating = 9.6 | |
| | | ULTIMATE (TYPICAL) VALUES | DESIGN VALUES |
| Compression Parallel (d)(e) | ASTM D198 | 1,588 psi (10.94 Mpa) | 540 psi (3.72 Mpa) |
| Compression Perpendicular (d)(f) | ASTM D143 | 1,437 psi (9.90 Mpa) | 540 psi (3.72 Mpa) |
| Bending Strength (d) | ASTM D198 | 3,280 psi (22.61 Mpa) | 500 psi (3.45 Mpa) |
| Shear Strength (d) | ASTM D143 | 1,761 psi (12.14 Mpa) | 360 psi (2.48 Mpa) |
| Modulus of Elasticity (d) | ASTM D4761 | 412,000 psi (2840.64 Mpa) | 200,000 psi (1378.95 Mpa) |
| Modulus of Rupture (d) | ASTM D4761 | 3,280 psi (22.61 Mpa) | 500 psi (3.45 Mpa) |
| Thermal Conductivity | ASTM C177 | 1.57 BTU-in/hr-ft @85°F (.0023 W/cm/°C) | |

NOTES:

(a) Corresponding Smoke Developed Index is 300.

(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) Material weight loss was 0%.

(d) 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).

(e) Compressive strength parallel to the length.

(f) Compressive strength perpendicular to length.