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LAMBOO® DESIGN™ COMPONENTS
MECHANICAL PROPERTIES

COMPRESSION:

- ◆ PARALLEL TO GRAIN: 9345 PSI (ASTM 3501-86 A)
- ◆ PERPENDICULAR TO GRAIN: 3043 PSI (ASTM 3501-86 A)

TENSILE STRENGTH:

- ◆ PARALLEL TO GRAIN: 15,300 PSI (ASTM 3500-90)
- ◆ PERPENDICULAR TO GRAIN: 665.5 PSI (ASTM 3500-90)

FLEXURAL STRENGTH:

- ◆ 14,300 PSI (ASTM D3043)

SHEAR STRENGTH:

- ◆ 789 PSI (ASTM D3048)

MODULUS OF ELASTICITY:

- ◆ 1.3E, 1.7E, 2.0E, 2.5E PSI (ASTM D 1037)

THERMAL PROPERTIES:

- ◆ THERMAL CONDUCTIVITY: $K = (W/M \cdot K(BTU \cdot IN/H \cdot FT^2 \cdot ^\circ F)) = 0.14(0.94)$
- ◆ THERMAL RESISTIVITY (R) VALUE = $(K \cdot M/W(H \cdot FT^2 \cdot ^\circ F/BTU \cdot IN)) = 7.9(1.1)$
- ◆ SPECIFIC GRAVITY: 0.60
- ◆ DENSITY: 38-47 #/FT³.

DIMENSIONAL STABILITY COEFFICIENT:

- ◆ VOLUMETRIC STABILITY FACTOR: 0.00144
- ◆ SOLID LAMBOO DIMENSIONAL STABILITY AT 20% RH - LINEAR EXPANSION:
PARALLEL -0.04 PERCENT AVERAGE (ASTM D 1037)
PERPENDICULAR -0.10 PERCENT AVERAGE (ASTM D 1037)
- ◆ THICKNESS SWELL: -0.13 PERCENT AVERAGE (ASTM D 1037)

MOISTURE CONTENT

- ◆ SOLID LAMBOO: 4.9 PERCENT AVERAGE (ASTM D 4442)

FLAMMABILITY:

- ◆ CLASS 1 (ASTM E648 - CRITICAL RADIANT PANEL TEST) - CLASS B (ASTM E 84 SURFACE BURNING)

SMOKE DENSITY:

- ◆ 270 - FLAMING MODE (ASTM E622)
- ◆ 300 - NON-FLAMING MODE (ASTM E622) * PASSING IS ANY NUMBER BELOW 450