



## AF-220 COMPOSITE FIBERGLASS DOOR TEST RESULTS

Pultruded Structural Shapes
Tensile Strength, ASTM-D638: Minimum 30,000 psi.
Compressive Strength, ASTM-D695: Minimum 30,000 psi.
Flexural Strength, ASTM-D790: Minimum 30,000 psi.
Flexural Modulus, ASTM-D790: Minimum 1.6 x 10 <sup>6</sup> psi.
Short Beam Shear, ASTM-D2344: Minimum 4,500 psi.
Impact, Notched, ASTM-D256: Minimum 25 ft-lb/in.
Thermal Expansion, ASTM-D696: Maximum 8.0 x 10 <sup>-6</sup> psi.
Surface Burning, ASTM-E84: Flame Spread ≤ 25, Smoke Developed ≤ 450.
AF-150 Framing
Tensile Strength, ASTM-D638: Minimum 30,000 psi.
Compressive Strength, ASTM-D695: Minimum 30,000 psi.
Flexural Strength, ASTM-D790: Minimum 30,000 psi.
Flexural Modulus, ASTM-D790: Minimum 1.6 x 10 <sup>6</sup> psi.
Short Beam Shear, ASTM-D2344: Minimum 4,500 psi.
Impact, Notched, ASTM-D256: Minimum 25 ft-lb/in.
Thermal Expansion, ASTM-D696: Maximum 8.0 x 10 <sup>-6</sup> psi.
Surface Burning, ASTM-E84: Flame Spread ≤ 25, Smoke Developed ≤ 450.
Fastener Withdrawal, ASTM-D1761: 924 lbs.
Percent Fiberglass: Minimum 50%.
Door and AF-150 Frame Assembly
PP Polypropylene Honeycomb Core
Thermal Transmittance, NFRC 100
<i>Opaque Swinging Door (&lt; than 50% glass)</i>
U-Factor = 0.29 Btu/hr·ft <sup>2</sup> ·°F
<i>Commercially Glazed Swinging Entrance Door (&gt; than 50% glass)</i>
U-Factor = 0.46 Btu/hr·ft <sup>2</sup> ·°F
Air Leakage, NFRC 400, ASTM-E283
<i>Opaque Swinging Door (&lt; than 50% glass)</i>
0.07 cfm/sqft @ 1.57 psf
0.03 cfm/sqft @ 6.24 psf
<i>Commercially Glazed Swinging Entrance Door (&gt; than 50% glass)</i>
0.05 cfm/sqft @ 1.57 psf
0.08 cfm/sqft @ 6.24 psf
STC and OITC, ASTM-E90:
STC = 32, OITC = 27



<b>Impact Test, TAS 201</b>
<i>Single Door, 3'4" x 6'11" overall size, 1-point latching</i>
9 lbs. missile @ 50 fps, minimum 3 impacts, no rips, tears, or penetrations
<b>Static Air Pressure, TAS 202</b>
<i>Single Door, 3'4" x 6'11" overall size, 1-point latching</i>
± 75 psf design pressure, pass
<b>Cyclic Wind Pressure Loading, TAS 203</b>
<i>Single Door, 3'4" x 6'11" overall size, 1-point latching</i>
± 75 psf design pressure, pass
Expanded Polystyrene Core
<b>Thermal Transmittance, NFRC 100</b>
<i>Opaque Swinging Door (&lt; than 50% glass)</i>
U-Factor = 0.28 Btu/hr·ft <sup>2</sup> ·°F
<i>Commercially Glazed Swinging Entrance Door (&gt; than 50% glass)</i>
U-Factor = 0.45 Btu/hr·ft <sup>2</sup> ·°F
<b>Air Leakage, NFRC 400, ASTM-E283</b>
<i>Opaque Swinging Door (&lt; than 50% glass)</i>
0.09 cfm/sqft @ 1.57 psf
0.17 cfm/sqft @ 6.24 psf
<i>Commercially Glazed Swinging Entrance Door (&gt; than 50% glass)</i>
0.02 cfm/sqft @ 1.57 psf
0.04 cfm/sqft @ 6.24 psf
<b>STC and OITC, ASTM-E90:</b>
STC = 30, OITC = 29