



AF-219-1 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 1.6×10^6 psi.
Short Beam Shear, ASTM-D2344: Minimum 4,500 psi.
Impact, Notched, ASTM-D256: Minimum 25 ft-lb/in.
Thermal Expansion, ASTM-D696: Maximum 8.0×10^{-6} 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 1.6×10^6 psi.
Short Beam Shear, ASTM-D2344: Minimum 4,500 psi.
Impact, Notched, ASTM-D256: Minimum 25 ft-lb/in.
Thermal Expansion, ASTM-D696: Maximum 8.0×10^{-6} 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 (< than 50% glass)</i>
U-Factor = 0.28 Btu/hr·ft ² ·°F
<i>Commercially Glazed Swinging Entrance Door (> than 50% glass)</i>
U-Factor = 0.47 Btu/hr·ft ² ·°F
Air Leakage, NFRC 400, ASTM-E283
<i>Opaque Swinging Door (< than 50% glass)</i>
0.03 cfm/sqft @ 1.57 psf
0.07 cfm/sqft @ 6.24 psf
<i>Commercially Glazed Swinging Entrance Door (> than 50% glass)</i>
0.07 cfm/sqft @ 1.57 psf
0.28 cfm/sqft @ 6.24 psf



STC and OITC, ASTM-E90:
STC = 33, OITC = 28
Impact Test, TAS 201.
<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
Static Air Pressure, TAS 202
<i>Single Door, 3'4" x 6'11" overall size, 1-point latching</i>
± 75 psf design pressure, pass
Cyclic Wind Pressure Loading, TAS 203
<i>Single Door, 3'4" x 6'11" overall size, 1-point latching</i>
± 75 psf design pressure, pass
Expanded Polystyrene Core
Thermal Transmittance, NFRC 100
<i>Opaque Swinging Door (< than 50% glass)</i>
U-Factor = 0.27 Btu/hr·ft ² ·°F
<i>Commercially Glazed Swinging Entrance Door (> than 50% glass)</i>
U-Factor = 0.46 Btu/hr·ft ² ·°F
Air Leakage, NFRC 400, ASTM-E283
<i>Opaque Swinging Door (< than 50% glass)</i>
0.00 cfm/sqft @ 1.57 psf
0.01 cfm/sqft @ 6.24 psf
<i>Commercially Glazed Swinging Entrance Door (> than 50% glass)</i>
0.02 cfm/sqft @ 1.57 psf
0.18 cfm/sqft @ 6.24 psf
STC and OITC, ASTM-E90:
STC = 31, OITC = 30