



## Performance and Physical Characteristic Requirements

**PVC:** Free Foam Cellular PVC material with a small-cell microstructure and density of .55 grams/cm<sup>3</sup>.

### Physical:

1. **Density:** 0.55 g/cm<sup>3</sup> when tested in accordance with ASTM D 792.
2. **Water Absorption:** Less than 0.50 percent when tested in accordance with ASTM D 570

### Mechanical:

1. **Tensile Strength:** 3582 psi when tested in accordance with ASTM D 638.
2. **Tensile Modulus:** 107,000 psi when tested in accordance with ASTM D 638
3. **Flexural Strength:** 5179 psi when tested in accordance with ASTM D790
4. **Flexural Modulus:** 215,600 psi when tested in accordance with ASTM D 790
5. **Modulus of Elasticity:** 209,500 psi when tested in accordance with ASTM D 638
6. **Elongation:** 9.0 percent when tested in accordance with ASTM D 638.
7. **Nail Hold:** 398 lbf/in of penetration when tested in accordance with ASTM D 1761.
8. **Compressive Strength:** 6,553 psi (thickness dependent)
9. **Compressive modulus:** 2,305 lbf/in (thickness dependent)
10. **Screw Hold:** 240 lbf/in of penetration when tested in accordance with ASTM D 1761.
11. **Staple Hold:** 69 lbf/in of penetration when tested in accordance with ASTM D 1761.
12. **Gardner Impact:** 34 In-lbs when tested in accordance with ASTM D5420
13. **Notched Izod Impact:** 0.270 Ft-lbs/inch when tested in accordance with ASTM D 256.
14. **Termite Resistance:** Rating of 10 as tested in accordance with ASTM D 3345.
15. **Hardness:** 60+ when tested in accordance with ASTM D 2240.
16. **Parking Garage Ceiling Soffit System:** 225 psf when tested in accordance with UL 580.

### Thermal:

1. **Coefficient of Linear Expansion:**  $3.25 \times 10^{-5}$  in/in/degrees F when tested in accordance with ASTM D 696.
2. **Burning Rate:** Failed to Ignite when tested in accordance with ASTM D 635.
3. **Flame Spread Index:** 20 when tested in accordance with ASTM E 84.
4. **Heat Deflection Temp (264 psi):** 146 degrees F when tested in accordance with ASTM D 648.
5. **Heat Deflection Temp (66 psi):** 153 degrees F when tested in accordance with ASTM D 648.
6. **Oil Canning (@ 140 degrees F):** Passed when tested in accordance with ASTM D 648.