

**CARLISLE SURE-SEAL®  
EXPANDED POLYSTYRENE INSULATION**

**GENERAL:**

A rigid polystyrene insulation board, Carlisle Sure-Seal EPS delivers an excellent insulation value. It is available in straight and tapered configurations plus as a composite form with HP Recovery Board. It is a proven performer as a insulation board under Carlisle Design B Ballasted System or as an insulating or tapered underlayment to HP Recovery Board or polyisocyanurate HP for use in Carlisle Design A Fully-Adhered and Mechanically-Fastened Roofing Systems. Specifications require a minimum density of 0.9 pounds per cubic foot, with higher densities available upon request. Carlisle's Sure-Seal EPS conforms to the physical property requirements of ASTM C578-85 Type I. The product has UL approval under Roofing Systems Category (TGFU) and FM approval under the 4450/4470 Standard.

**TYPICAL PROPERTIES AND CHARACTERISTICS:**

| Thickness<br>Inches (mm) | 0.9 Density<br>R-Value<br>@ 40EF | 1.0 Density<br>R-Value<br>@ 40EF | 1.5 Density<br>R-Value<br>@ 40EF | 2.0 Density<br>R-Value<br>@ 40EF |
|--------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
| 1.0                      | 4.00                             | 4.17                             | 4.55                             | 4.76                             |
| 1.5                      | 6.00                             | 6.25                             | 6.82                             | 7.14                             |
| 2.0                      | 8.00                             | 8.30                             | 9.09                             | 9.52                             |
| 2.5                      | 10.00                            | 10.42                            | 11.37                            | 11.90                            |
| 3.0                      | 12.00                            | 12.50                            | 13.65                            | 14.29                            |
| 3.5                      | 14.00                            | 14.58                            | 15.92                            | 16.67                            |
| 4.0                      | 16.00                            | 16.60                            | 18.20                            | 18.87                            |
| 4.5                      | 18.00                            | 18.75                            | 20.47                            | 21.43                            |
| 5.0                      | 20.00                            | 20.80                            | 22.75                            | 23.81                            |
| 5.5                      | 22.00                            | 22.92                            | 25.02                            | 26.19                            |
| 6.0                      | 24.00                            | 25.00                            | 27.30                            | 28.57                            |

Physical requirements at 0.9 lbs. per cubic foot density:

|                                     |                   |                       |
|-------------------------------------|-------------------|-----------------------|
| Compressive Resistance              | ASTM C 165/D 1621 | 10.0% psi, min.       |
| Flexural Strength                   | ASTM C 203        | 25.0 psi, min.        |
| Water Vapor Permeability            | ASTM E 96         | 5.0 perm-inches, max. |
| Water Absorption by Total Immersion | ASTM C 272        | 4.0% by volume, max.  |
| Dimensional Stability               | ASTM D 2126       | 2.0%, max.            |

**CAUTIONS:**

Modified EPS like most plastic foams is flammable. Do not expose EPS to open flames or other direct or indirect high temperature ignition sources such as burning operations, welding, burning cigarettes, space heaters or naked lights. When burning, EPS will consume oxygen, release great heat and smoke and potentially toxic gases such as carbon monoxide and carbon dioxide. Install only in strict compliance with BOCA, ICBO, or SBCCI codes. Failure to comply with these codes may increase the risk of fire and result in personal injury or property damage from smoke, flames or water.

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