

Product Information Bulletin

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PlastiSpan® 60 Insulation Material Properties

PlastiSpan® 60 insulation is a closed cell expanded polystyrene (EPS) insulation that meets the requirements of ASTM C578¹, Type XV. **PlastiSpan 60** insulation closed cell structure resists water absorption so it retains its R-value even in applications where severe temperature differentials occur.

PlastiSpan 60 insulation high compressive resistance is ideal for use in applications where heavy loads are expected such as low temperature freezer floor or highway construction. **PlastiSpan 60** insulation compressive resistance at 1% strain resists compressive creep under specified on the long term.

| Material Property ² | ASTM Test Method | Units | Values | |
|--|------------------|--|----------------|------------|
| Compressive Resistance <i>Minimum @ 10% strain</i> | D1621 | kPa (psi) | 414 (60) | |
| Thermal Resistance³ <i>Minimum per 25 mm (1 inch) thickness</i> | C518 | m ² •°C/W (ft ² •h•°F/BTU) | 0.75 (4.3) | |
| Flexural Strength <i>Minimum</i> | C203 | kPa (psi) | 517 (75) | |
| Water Vapour Permeance <i>Maximum</i> | E96 | ng/(Pa•s•m ²) (Perms) | 90 (1.5) | |
| Water Absorption⁴ <i>Maximum</i> | C272 | % By volume | 2.0 | |
| Dimensional Stability <i>Maximum, 7 Days @ 70 ± 2 °C (158 ± 4 °F)</i> | D2126 | % Linear Change | 1.5 | |
| Limiting Oxygen Index <i>Minimum</i> | D2863 | % | 24 | |
| Additional Material Properties | | | | |
| Compressive Resistance⁵ <i>Minimum @ 1% strain</i> | D1621 | kPa (psi) | 180 (26.1) | |
| Compressive Modulus <i>Minimum</i> | | kPa (psi) | 18,000 (2,610) | |
| Thermal Resistance⁶ <i>Minimum per 25 mm (1 inch) thickness</i> | C518 | °C (°F) | -3.9 (25) | -10 (14) |
| | | m ² •°C/W (ft ² •h•°F/BTU) | 0.86 (4.9) | 0.87 (5.0) |

1. ASTM C578, **Standard Specification for Rigid, Cellular Polystyrene Thermal Insulation**
2. **PlastiSpan 60** insulation material properties exceed requirements for CAN/ULC-S701 (**Standard for Thermal Insulation, Polystyrene, Boards and Pipe Covering**), type 3.
3. Thermal resistance value measured at a mean temperature of 24 °C (75 °F).
4. The water absorption laboratory test method involves complete submersion under a head of water for 96 hours. The water absorption value above is applicable to specific end-use design requirements only to the extent that the end-use conditions are similar to test method requirements.
5. Compressive resistance at 1% strain is within the elastic limit for **PlastiSpan 40** insulation and is accepted as the design compressive resistance to limit long-term deformation under structural load.
6. **Thermal resistance values at additional mean temperatures of -3.9 °C (25 °F) and -10 °C (14 °F) are provided for reference purposes where applicable.**