

Product Information Bulletin

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PlastiSpan® 40 Insulation Material Property Data Sheet

PlastiSpan® 40 insulation is a closed cell expanded polystyrene (EPS) insulation that meets or exceeds the requirements of CAN/ULC-S701-11¹. **PlastiSpan 40** insulation closed cell structure resists water absorption so it will retain its R-value even in applications where severe temperature differentials occur.

PlastiSpan 40 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® 40** insulation compressive resistance at 1% strain resists compressive creep under specified on the long term.

Material Property	ASTM Test Method	Units	Values
Compressive Resistance <i>Minimum @ 10% strain²</i>	D1621	kPa (psi)	276 (40)
Compressive Modulus <i>Minimum</i>		kPa (psi)	10,345 (1,500)
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)	414 (60)
Water Vapour Permeance <i>Maximum</i>	E96	ng/(Pa·s·m ²) (Perms)	90 (1.5)
Water Absorption⁴ <i>Maximum</i>	D2842	% 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 for Reference			
Compressive Resistance <i>Minimum @ 1% strain</i>	D1621	kPa (psi)	103 (15.0)
Thermal Resistance⁵ <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)	0.84 (4.8) 0.87 (5.0)

- PlastiSpan 40** insulation material properties exceed requirements for CAN/ULC-S701 (**Standard for Thermal Insulation, Polystyrene, Boards and Pipe Covering**), type 3.
- Compressive resistance at 10% strain exceeds minimum requirement for CAN/ULC-S701, type 3. 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.
- Thermal resistance value at a mean temperature of 24 °C (75 °F) meets requirements of CAN/ULC-S701.
- 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.
- 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.**