

# 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-S701-11, **Standard for Thermal Insulation, Polystyrene, Boards and Pipe Covering**. **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 provides a minimum compressive resistance of 276 kPa (40 psi). The high compressive resistance makes it ideal for use in low temperature freezer floor or highway construction applications where heavy loads are expected. **PlastiSpan® 40** insulation resists compressive creep and fatigue to deliver specified compressive resistance on the long term.

Material Property	Test Method	Units	Values	
<b>Compressive Resistance<sup>1</sup></b> <i>Minimum @ 10% Deformation</i>	ASTM D1621	kPa (psi)	276 (40)	
<b>Compressive Modulus</b> <i>Minimum</i>		kPa (psi)	10,000 (1,450)	
<b>Thermal Resistance</b> <i>Minimum per 25 mm (1 inch)</i>	ASTM C518	m <sup>2</sup> ·°C/W (ft <sup>2</sup> ·h·°F/BTU)	0.75 (4.3)	
<b>Flexural Strength</b> <i>Minimum</i>	ASTM C203	kPa (psi)	414 (60)	
<b>Water Vapour Permeance</b> <i>Maximum</i>	ASTM E96	ng/(Pa·s·m <sup>2</sup> ) (Perms)	90 (1.5)	
<b>Water Absorption<sup>2</sup></b> <i>Maximum</i>	ASTM D2842	% By volume	2.0	
<b>Dimensional Stability</b> <i>Maximum, 7 Days @ 70 ± 2 °C (158 ± 4 °F)</i>	ASTM D2126	% Linear Change	1.5	
<b>Limiting Oxygen Index</b> <i>Minimum</i>	ASTM D2863	%	24	
<b>Thermal Resistance Values at Additional Reference Mean Temperatures</b>				
<b>Thermal Resistance<sup>3</sup></b> <i>Minimum per 25 mm (1 inch)</i>	ASTM C518	°C (°F)	-3.9 (25)	-10 (14)
		m <sup>2</sup> ·°C/W	0.84	0.87
		(ft <sup>2</sup> ·h·°F/BTU)	(4.8)	(5.0)

1. PlastiSpan 40 insulation compressive resistance exceeds requirements for CAN/ULC-S701, type 3.
2. 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.
3. Thermal resistance value for compliance with the CAN/ULC-S701 is measured at a mean temperature of 24 °C (75 °F). **Thermal resistance values at the additional mean temperatures of -3.9 °C (25 °F) and -10 °C (14 °F) are provided for reference purposes where applicable.**