

# Product Information Bulletin

BULLETIN NO.	311
ISSUED:	January 29, 2020
REPLACES:	December 10, 2019

## PlastiSpan® 60 Insulation Material Properties

**PlastiSpan® 60** insulation is a rigid, closed cell expanded polystyrene (EPS) insulation that exceeds CAN/ULC-S701.1, Type 3<sup>1</sup> material property requirements. **PlastiSpan 60** insulation closed cell structure resists water absorption so it will retain its thermal resistance 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 loads on the long term.

Material Property	Test Method	Units	Values	
<b>Compressive Resistance</b> <i>Minimum @ 10% strain</i>	ASTM D1621	kPa (psi)	414 (60)	
<b>Compressive Resistance</b> <sup>2</sup> <i>Minimum @ 1% strain</i>	ASTM D1621	kPa (psi)	180 (26.1)	
<b>Thermal Resistance</b> <sup>3</sup> <i>Minimum per 25 mm (1 inch) thickness</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)	517 (75)	
<b>Shear Strength</b> <i>Minimum</i>	ASTM C273	kPa (psi)	260 (38)	
<b>Water Vapour Permeance</b> <i>Maximum</i>	ASTM E96	ng/(Pa•s•m <sup>2</sup> ) (Perms)	130 (2.3)	
<b>Water Absorption</b> <sup>4</sup> <i>Maximum</i>	ASTM C272	% 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>Flame Spread Rating</b>	CAN/ULC S102.2	NA	290	
<b>Smoke Developed Classification</b>		NA	Over 500	
<b>Minimum Thermal Resistance at Additional Mean Temperatures</b> <sup>5</sup>				
<b>Thermal Resistance</b> <i>Minimum per 25 mm (1 inch)</i>	-3.9 °C (25 °F)	ASTM C518	m <sup>2</sup> •°C/W (ft <sup>2</sup> •h•°F/BTU)	0.86 (4.9)
	-10 °C (14°F)			0.87 (5.0)

- PlastiSpan 60** insulation material properties exceed CAN/ULC-S701.1:2017 (**Standard for Thermal Insulation, Polystyrene, Boards**) Type 3 requirements. **NOTE: PlastiSpan 60** insulation material properties meet ASTM C578 (**Standard Specification for Rigid, Cellular Polystyrene Thermal Insulation**), Type XV requirements.
- Compressive resistance at 1% strain is within the elastic limit for **PlastiSpan 60** insulation and is accepted as the design compressive resistance to limit long-term deformation under structural load.
- Thermal resistance value measured at a mean temperature of 24 °C (75 °F).
- Water absorption laboratory test methods involve complete submersion under a head of water. The laboratory 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.**