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Product Information Bulletin

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EnerSpan® Insulation Material Properties for CAN/ULC-S701 Types

EnerSpan® insulation is a rigid, closed cell, silver-gray insulation that meets or exceeds requirements for expanded polystyrene (EPS) insulation manufactured to CAN/ULC-S701, ***Standard for Thermal Insulation, Polystyrene, Boards and Pipe Covering***. ***EnerSpan*** insulation is manufactured using ***Neopor***® ***F5300 GPS Plus***, a graphite-enhanced expandable polystyrene (GPS) raw material provided by BASF.

The graphite within the silver-gray cellular structure of ***EnerSpan*** insulation reduces radiation heat transfer and results in an enhanced thermal resistance compared to standard white EPS insulation manufactured to CAN/ULC-S701.

Material Properties	Units	CAN/ULC-S701 Type		
		1	2	3
Thermal Resistance[1] *Minimum per 25 mm (inch)* ASTM C518	$m^2 \cdot {}^oC/W$ $(ft^2 \cdot h \cdot {}^oF/BTU)$	0.82 (4.7)	0.82 (4.7)	0.82 (4.7)
Compressive Resistance *Minimum @ 10% Deformation* ASTM D1621	kPa (psi)	70 (10)	110 (16)	170 (25)
Flexural Strength *Minimum* ASTM C203	kPa (psi)	170 (25)	240 (35)	300 (44)
Water Vapour Permeance[2] *Maximum* ASTM E96	$ng/(Pa \cdot s \cdot m^2)$ (Perms)	300 (5.2)	200 (3.5)	130 (2.25)
Water Absorption[3] *Maximum* ASTM D2842	% By volume	6.0	4.0	2.0
Dimensional Stability *Maximum, 7 Days @ 70 ± 2°C (158 ± 4°F)* ASTM D2126	% Linear Change	1.5	1.5	1.5
Limiting Oxygen Index *Minimum* ASTM D2863	%	24	24	24
Surface Burning Characteristics *Classification or Rating* CAN/ULC S102.2	Flame Spread	220		
	Smoke Developed	Over 500		

1. ***EnerSpan*** insulation thermal resistance values in the table above exceed minimum requirements for EPS insulation manufactured to CAN/ULC-S701.
2. WVP values quoted are maximum values for 25-mm (1-inch) thick samples with natural skins intact. Lower values will result for thicker materials.
3. ASTM D2842 is a laboratory test method that requires complete submersion of test specimens under a head of water for 96 hours. The water absorption values above are applicable to specific end-use design requirements only to the extent that the end-use conditions are similar to the laboratory test requirements.