

Product Information Bulletin

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DuroSpan® GPS Insulation - CAN/ULC-S701, Type 1 Material Property Data

DuroSpan® GPS insulation is a rigid, closed-cell expanded polystyrene (EPS) insulation with a silver-gray colour that meets or exceeds requirements as per CAN/ULC-S701¹, Type 1. **DuroSpan GPS** insulation has laminated films on the top and bottom surfaces which result in a more durable product that is less susceptible to handling damage.

DuroSpan GPS insulation is manufactured using **Neopor® F5300 GPS Plus**, a graphite-enhanced expandable polystyrene (GPS) provided by BASF. The graphite within the cellular structure of **DuroSpan GPS** insulation reduces radiation heat transfer resulting in enhanced thermal resistance compared to standard white EPS insulation.

Material Properties	Test Method	Units	Values
Thermal Resistance ² <i>Minimum per 25 mm (inch)</i>	ASTM C518	m ² ·°C/W (ft ² ·h·°F/BTU)	0.82 (4.7)
Compressive Resistance <i>Minimum @ 10% Deformation</i>	ASTM D1621	kPa (psi)	70 (10)
Flexural Strength <i>Minimum</i>	ASTM C203	kPa (psi)	170 (25)
Water Vapour Permeance ³ <i>Maximum for 25-mm (1-inch) thickness</i>	ASTM E96	ng/(Pa·s·m ²) (Perms)	30 (0.5)
Water Absorption ⁴ <i>Maximum</i>	ASTM D2842	% By volume	6.0
Dimensional Stability <i>Maximum, 7 Days @ 70 ± 2°C (158 ± 4°F)</i>	ASTM D2126	% Linear Change	1.5
Limiting Oxygen Index <i>Minimum</i>	ASTM D2863	%	24
Surface Burning Characteristics <i>Classification or Rating</i>	CAN/ULC S102.2	Flame Spread	220
		Smoke Developed	Over 500

1. CAN/ULC-S701-11, **Standard for Thermal Insulation, Polystyrene, Boards and Pipe Covering.**
2. **DuroSpan GPS** insulation material properties are third party certified under a quality listing program administered by Intertek. See Intertek Code Compliance Research Report CCRR-1033 for detailed code compliance information.
3. Unfaced EPS insulation **maximum** vapour permeance is 300 ng/Pa·s·m² (5.0 perms). **DuroSpan GPS** insulation vapour permeance is significantly lower as a result of the laminated films. Where water vapour permeance is a design issue, contact Plasti-Fab technical services for additional information.
4. The water absorption laboratory test method involves complete submersion 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 test method requirements.