

Product Information Bulletin

343

DuroFoam Insulation - CAN/ULC-S701, Type 1 Material Properties

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DuroFoam® Insulation is a rigid, closed-cell insulation that meets or exceeds requirements for expanded polystyrene (EPS) insulation manufactured to CAN/ULC-S701, Type 1 as per the table below. **DuroFoam** insulation has laminated films on the top and bottom surfaces which results in a more durable product that is less susceptible to handling damage.

DuroFoam insulation has a green facer with product identification and markings to assist with cutting insulation/spacing of fasteners for attachment to framing. The reflective facer on the opposite side contains a thin layer of foil embedded within the film. The reflective facer itself does not increase the nominal thermal resistance of **DuroFoam** insulation. Additional information on wall systems using reflective insulation is provided in Plasti-Fab PIB 253.

Material Property ¹	Test Method	Units	Values
Thermal Resistance <i>Minimum per 25 mm (inch)</i>	ASTM C518	m ² •°C/W (ft ² •h•°F/BTU)	0.65 (3.75)
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 ² <i>Maximum for 25-mm (1-inch) thickness</i>	ASTM E96	ng/(Pa•s•m ²) (Perms)	30 (0.5)
Water Absorption ³ <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	290
		Smoke Developed	Over 500

1. **DuroFoam** insulation properties are third party certified to CAN/ULC-S701, **Standard for Thermal Insulation, Polystyrene, Boards and Pipe Covering**, and listed by the Canadian Construction Materials Centre (CCMC) under evaluation listing number 12424-L (Type 1).

2. Unfaced EPS insulation **maximum** vapour permeance is 300 ng/Pa•s•m² (5.2 perms). **DuroFoam** 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.

3. 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.