

## Product Information Bulletin

### DuroSpan<sup>®</sup> GPS Insulation - CAN/ULC-S701.1, Type 1 Material Property Data

**DuroSpan<sup>®</sup> 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-S701.1<sup>1</sup>, 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<sup>®</sup> 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 <sup>2</sup>	Units	Values
<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)	0.82 (4.7)
<b>Compressive Resistance</b> <i>Minimum @ 10% Strain</i> ASTM D1621	kPa (psi)	70 (10)
<b>Flexural Strength</b> <i>Minimum</i> ASTM C203	kPa (psi)	170 (25)
<b>Water Vapour Permeance</b> <sup>3</sup> <i>Maximum</i> ASTM E96	ng/(Pa•s•m <sup>2</sup> ) (Perms)	<30 <(0.5)
<b>Water Absorption</b> <sup>4</sup> <i>Maximum</i> ASTM D2842	% By volume	6.0
<b>Dimensional Stability</b> <i>Maximum</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	220
<b>Smoke Developed Classification</b> CAN/ULC S102.2	NA	Over 500

<sup>1</sup>. CAN/ULC-S701.1 (formerly CAN/ULC-S701), **Standard for Thermal Insulation, Polystyrene, Boards.**

<sup>2</sup>. **DuroSpan GPS** insulation material properties are third party certified to CAN/ULC-S701.1 under an Intertek third party certification program (see Intertek Code Compliance Research Report CCRR-1033 for additional information).

<sup>3</sup>. WVP values quoted are maximum values for 25-mm (1-inch) thick **DuroSpan GPS** insulation with laminated film facers on both sides.

<sup>4</sup>. 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.

## Handling, Storage and Installation Recommendations for *DuroSpan GPS* Insulation

The following material handling, jobsite storage and installation recommendations have been provided by BASF for insulation material made from *Neopor*<sup>®</sup> *F5300 GPS Plus* graphite-enhanced expandable polystyrene (GPS) raw material.

### **Material Handling:**

Material handling and the flow of materials from manufacturing site to job site is a significant part of the construction process. Precautionary measures taken in packaging, storage, transportation and installation of insulation products made of *Neopor* can help minimize the potential for damage to the products.

### **Jobsite Storage:**

***Precautions taken when storing insulation products on the jobsite can help minimize the potential for damage. Keep product tarped or covered to protect from weather. Do not use clear plastic covering film. If possible, store indoors. Care should be taken to keep exposed foam protected from reflective sunlight or prolonged solar exposure.***

### **Installation:**

Precautions taken during the construction process can help minimize the potential for damage. Care should be taken to keep exposed foam protected from reflected sunlight or prolonged solar exposure. If deformation of the insulation product occurs due to excessive heat transferred from reflected and concentrated sunlight, remove the reflective surface or shield the insulation product.

A secondary method to protect the foam from direct sunlight and heat is to install sunscreen or tarp on the outside of the scaffolding, much the same that is used on building construction that protects the public when it is necessary for them to pass by construction site underneath the scaffolding. This is only needed until the finish coat of the foam is applied.

