Radon Guard® insulation is patented sub-slab depressurization panel. The interconnected channels on the underside of the panel direct soil gas movement between the ground and the air barrier system to a vent pipe in slab on ground applications as required by National Building Code of Canada 2010, Section 9.13.4. The vent pipe is required to connect to a radon gas mitigation system as per applicable code.

CCMC Evaluation Report 13698-R confirms that Radon Guard Insulation is a code compliant replacement for a 100 mm thick layer of clean granular fill material as required by code.

Radon Guard insulation material properties below as per CAN/ULC-S701, Type 2 are adequate for typical residential basement slab loads. See Plasti-Fab PIB 300 for information on allowable loads for various Radon Guard insulation types. Contact a Plasti-Fab technical sales representative for additional assistance.

<table>
<thead>
<tr>
<th>CAN/ULC-S701 Material Properties¹</th>
<th>Test Method</th>
<th>Units</th>
<th>Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thermal Resistance</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Minimum RSI per 25 mm (R per inch)</td>
<td>ASTM C518</td>
<td>m²°C/W</td>
<td>0.70</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(ft²·h·°F/BTU)</td>
<td>(4.04)</td>
</tr>
<tr>
<td>Compressive Resistance</td>
<td></td>
<td>kPa</td>
<td>110</td>
</tr>
<tr>
<td>Minimum @ 10% Deformation</td>
<td>ASTM D1621</td>
<td>psi</td>
<td>(16)</td>
</tr>
<tr>
<td>Flexural Strength</td>
<td></td>
<td>kPa</td>
<td>240</td>
</tr>
<tr>
<td>Minimum</td>
<td>ASTM C203</td>
<td>psi</td>
<td>(35)</td>
</tr>
<tr>
<td>Water Vapour Permeance</td>
<td></td>
<td>ng/(Pa·s·m²)</td>
<td>200</td>
</tr>
<tr>
<td>Maximum</td>
<td>ASTM E96</td>
<td>Perms</td>
<td>(3.5)</td>
</tr>
<tr>
<td>Water Absorption</td>
<td></td>
<td>% By volume</td>
<td>4.0</td>
</tr>
<tr>
<td>Maximum</td>
<td>ASTM D2842</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dimensional Stability</td>
<td></td>
<td>% Linear Change</td>
<td>1.5</td>
</tr>
<tr>
<td>Maximum, 7 Days @ 70 ± 2°C (158 ± 4°F)</td>
<td>ASTM D2126</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Limiting Oxygen Index</td>
<td></td>
<td>%</td>
<td>24</td>
</tr>
<tr>
<td>Minimum</td>
<td>ASTM D2863</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

¹ CAN/ULC-S701, Standard for Thermal Insulation, Polystyrene, Boards and Pipe Covering is the National Standard of Canada for moulded expanded polystyrene (EPS) insulation. Material properties are certified under a listing and certification program monitored by Intertek Testing Services.
How does *Radon Guard* insulation work?

*Radon Guard* insulation panels are installed with the interconnected channels facing down. This creates a space for radon gas to move to the vent pipe. The radon gas can then be removed when the vent pipe is attached to a mitigation system.

The table below provides dimensions and RSI (R-value) for standard *Radon Guard* insulation panels available.

<table>
<thead>
<tr>
<th><em>Radon Guard</em> Insulation Overall Panel Dimensions</th>
<th>RSI</th>
<th>R-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>millimeters</td>
<td>inches</td>
<td>m²°C/W</td>
</tr>
<tr>
<td>914 x 1219 x 89</td>
<td>36 x 48 x 3.5</td>
<td>1.4</td>
</tr>
<tr>
<td>914 x 1219 x 102</td>
<td>36 x 48 x 4.0</td>
<td>1.8</td>
</tr>
<tr>
<td>914 x 1219 x 114</td>
<td>36 x 48 x 4.5</td>
<td>2.1</td>
</tr>
<tr>
<td>914 x 1219 x 127</td>
<td>36 x 48 x 5.0</td>
<td>2.5</td>
</tr>
<tr>
<td>914 x 1219 x 140</td>
<td>36 x 48 x 5.5</td>
<td>2.8</td>
</tr>
</tbody>
</table>

**Note:** *Radon Guard* insulation thickness includes 38 mm (1 ½”) high interconnected channels on the underside of panel.