# HD400 - GEOTECHNICAL INSULATING PANEL

<table>
<thead>
<tr>
<th>Standard reference</th>
<th>14301 MTQ STANDARD, TOME VII, CHAPTER 14 (Misc. materials)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class</td>
<td>TYPE A : POLYSTYRENE for thermal insulation</td>
</tr>
<tr>
<td>Maximum service temperature</td>
<td>74 °C [165 °F]</td>
</tr>
<tr>
<td>Flammability</td>
<td>Flame retardant agent</td>
</tr>
<tr>
<td>Perpendicularity</td>
<td>0.2 in [5 mm] (Maximum difference between diagonal lengths)</td>
</tr>
<tr>
<td>Compression resistance (min.) @ 10 % of deformation (ASTM D1621)</td>
<td>414 kPa [60 psi]</td>
</tr>
<tr>
<td>Elasticity module (min.) (ASTM 1621)</td>
<td>15 000 kPa [2176 psi]</td>
</tr>
<tr>
<td>Thermal resistance - per inch (min.) (ASTM C518)</td>
<td>R - 4.2 (0.74 m²·°C/W)</td>
</tr>
<tr>
<td>Dimensions</td>
<td>24 in x 48 in [609 mm x 1 219 mm] (Straight edges) or 48 in x 48 in [1 219 mm x 1 219 mm] (Shiplap)</td>
</tr>
<tr>
<td>Thickness</td>
<td>2.4 po [61 mm] (Adjustable)</td>
</tr>
<tr>
<td>Specific aspect</td>
<td>1 in shiplap [25 mm]</td>
</tr>
<tr>
<td>Water absorption (ASTM D2842)</td>
<td>Maximum 2 %</td>
</tr>
<tr>
<td>Packaging options</td>
<td>Regular plastic wrap</td>
</tr>
<tr>
<td></td>
<td>UV plastic wrap (For long-term storage)</td>
</tr>
</tbody>
</table>

**GEOTECHNICAL APPLICATIONS:**
- Road insulation *Protection from frost*
- Load distribution
- Road
- Railways
- Airport runways
- Underground infrastructure insulation *(Aqueducts and sewers)*

Expanded polystyrene based geotechnical components have been used for decades as insulation on road infrastructures projects.

Due to their great structural stability, their resistance to freeze-thaw cycles, their durability and their excellent cost/effectiveness costs, the high density insulation geotechnical panels have proven to be a great value option to reduce maintenance costs and road infrastructure repairs, throughout their lifetime.
HD400
GEOTECHNICAL INSULATION
Tested as per ASTM D1621 & ASTM C518 standards

VERY HIGH DENSITY, compression resistance 414 kPa / 60 psi*
(When tested at 10 % of deformation as per ASTM D1621)

48 in x 48 in x 2.4 in panel WITH shiplap
24 in x 48 in x 2.4 in WITHOUT shiplap

Made of EPS (Expanded Polystyrene)
Contains 95 % AIR

LIGHT, less than 6 kg per panel (2.4 in thick)

Water and humidity RESISTANT
Long term DIMENSIONAL STABILITY

STABLE throughout freeze and thaw cycles
DURABLE, does not decompose
INERT in the environment, does not transform into gas
or leachate
FIREPROOF material, does not spread flame

DOES NOT contain CFC / HCFC / HFC
Recyclable

Geotechnical behaviour DOCUMENTED and PREDICTABLE
MEETS REQUIRED MECHANICAL PROPERTIES of MTQ 14301
STANDARD, VOLUME VII, CH 14 (MISC. MATERIALS)
TYPE A / THERMAL INSULATION

* Tested as per ASTM D1621 & ASTM C518. The load limit used by Geofoam designs is typically
at 35 % of compression resistance.

Over the years, Polymos® has been involved in numerous projects relying on
the unique characteristics of lightweight fill. From that extensive experience,
Polymos® specialists developed an unmatched expertise to offer you more
than only lightweight fill. Contact us to benefit from our full services:

- Technical assistance
- Design
- Lightweight fill components, custom-design and manufacturing

This product is available in various dimensions and densities to meet your project’s
specific requirements. Custom-made blocks and sheets can be designed to meet
atypical specifications. Contact us for more information or to get a quote based on
your needs.

150 5th Boulevard, Terrasse-Vaudreuil, Quebec, Canada  J7V 5M3  Tel.: (514) 453-1920  Fax: (514) 453-0295
www.polymos.com  info@polymos.com