PROMATECT®-H
Calcium Silicate Board

www.promat-tunnel.com
**Advantages**

- Resistant to the effects of moisture
- Not physically deteriorate when used in damp or humid conditions
- Performance characteristics are not degraded by age or moisture.

**Applications**

- Tunnel lining, concrete floor and wall upgrading
- M&E services enclosure
- Access panels and hatches, fire doors
- Structural steel protection
- Membrane ceilings
- Cladding to steel ducts, self-supporting ducts

**Quality assurance**

Promat products are manufactured to stringent quality control systems to assure that our customers receive materials made to the highest standards.

Operating to these standards means that all activities, which have a bearing upon quality, are set out in written procedures.

Systematic and thorough checks are made on all materials and their usage. Test equipment is subjected to regular checks and is referred back to national standards.

The information given in this data sheet is based on actual tests and is believed to be typical of the product. No guarantee of results is implied however, since conditions of use are beyond our control.

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**Fire protection thickness**

Fire protection thickness requirements are often specified in the owner operator’s engineering codes of practice.

Alternatively, please consult Promat

**General technical properties**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product generic description</td>
<td>non-combustible, fire resisting calcium silicate board</td>
</tr>
<tr>
<td>DIN 4102, Part 1</td>
<td></td>
</tr>
<tr>
<td>Combustibility</td>
<td>DIN 4102, Part 1</td>
</tr>
<tr>
<td>BS 476, Part 4</td>
<td></td>
</tr>
<tr>
<td>EN 13051-1-A1</td>
<td></td>
</tr>
<tr>
<td>Classification Report</td>
<td></td>
</tr>
<tr>
<td>WFRGent 11527C</td>
<td></td>
</tr>
<tr>
<td>Board format (length x width)</td>
<td>mm</td>
</tr>
<tr>
<td>1250 x 2500</td>
<td></td>
</tr>
<tr>
<td>Tolerance on length and width</td>
<td>± 0.3</td>
</tr>
<tr>
<td>Board thickness</td>
<td>mm</td>
</tr>
<tr>
<td>6, 8, 10, 12, 15, 20, 25</td>
<td></td>
</tr>
<tr>
<td>Tolerances on thickness</td>
<td>mm</td>
</tr>
<tr>
<td>6 - 12 mm</td>
<td>± 0.5</td>
</tr>
<tr>
<td>15 - 20 mm</td>
<td>± 1.0</td>
</tr>
<tr>
<td>&gt; 20 mm</td>
<td>± 1.5</td>
</tr>
<tr>
<td>Density (nominal, oven dry)</td>
<td>Kg/m³</td>
</tr>
<tr>
<td>3.00</td>
<td>ca. 870</td>
</tr>
<tr>
<td>Alkalinity (approximate)</td>
<td>pH</td>
</tr>
<tr>
<td>12</td>
<td></td>
</tr>
<tr>
<td>Thermal conductivity λ</td>
<td>W/m°K</td>
</tr>
<tr>
<td>0.175</td>
<td>ca.0.175 (at 20°C)</td>
</tr>
<tr>
<td>Water absorption</td>
<td>g/cm³</td>
</tr>
<tr>
<td>0.50</td>
<td></td>
</tr>
<tr>
<td>Moisture diffusion resistance μ</td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>ca. 20</td>
</tr>
<tr>
<td>Typical moisture content (at EMC*)</td>
<td>%</td>
</tr>
<tr>
<td>5 - 10</td>
<td></td>
</tr>
<tr>
<td>Surface conditions</td>
<td></td>
</tr>
<tr>
<td>Front face: smooth, unsanded</td>
<td></td>
</tr>
<tr>
<td>Back face: textured and or sanded</td>
<td></td>
</tr>
<tr>
<td>Colour: beige - white</td>
<td></td>
</tr>
<tr>
<td>Storage</td>
<td></td>
</tr>
<tr>
<td>Store on flat surface, in a dry area.</td>
<td></td>
</tr>
</tbody>
</table>

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All physical and mechanical values are averages based on standard production and tested according to internal procedures. The typical values are given for guidance. The figures can change dependent on the test methods used. If a particular value is of prime importance for a specification, please consult Promat Technical Department.
Typical mechanical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bending strength (longitudinal direction)</td>
<td>7.6 N/mm²</td>
</tr>
<tr>
<td>Tensile strength (longitudinal direction)</td>
<td>4.8 N/mm²</td>
</tr>
<tr>
<td>Compressive strength (perpendicular to the surface)</td>
<td>9.3 N/mm²</td>
</tr>
</tbody>
</table>

Screw pull out resistance: screw into board surface - 15mm deep
- quick fix screw - 3.9 x 55: 624 N
- quick fix screw - 4.0 x 40: 584 N
- quick fix screw - 4.5 x 50: 581 N
- timber screw - 3.9 x 55: 550 N
- screw inserts (Rampa): 350 N

Bolt pull through resistance (board thickness = 25mm) Bolt M8, washer diameter 30mm: 3.220 N

Formats & weights

<table>
<thead>
<tr>
<th>Thickness (mm)</th>
<th>Dry weight (Kg/m²)</th>
<th>Weight (Kg/m²) at 20°C, 65% RH</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>ca. 5.4</td>
<td>ca. 5.7</td>
</tr>
<tr>
<td>8</td>
<td>ca. 7.2</td>
<td>ca. 7.6</td>
</tr>
<tr>
<td>10</td>
<td>ca. 9.0</td>
<td>ca. 9.5</td>
</tr>
<tr>
<td>12</td>
<td>ca. 10.8</td>
<td>ca. 11.5</td>
</tr>
<tr>
<td>15</td>
<td>ca. 13.1</td>
<td>ca. 13.9</td>
</tr>
<tr>
<td>20</td>
<td>ca. 17.4</td>
<td>ca. 18.5</td>
</tr>
<tr>
<td>25</td>
<td>ca. 21.8</td>
<td>ca. 23.1</td>
</tr>
</tbody>
</table>

* Project specific thickness can be manufactured in 1mm increments. Please contact Promat for further information.

* EMC: Equilibrium moisture content.

Processing & machining

When machining the product with power tools, do not breathe dust and respect the regulatory occupational exposure limits for total inhalable and respirable dust. Wear safety goggles. Avoid contact with skin and eyes. Use dust extraction. In case of insufficient ventilation, wear suitable respiratory equipment to avoid health effects.

Waste disposal

Refer to local legislation

If not available: The board is not classified as a dangerous substance and no special provisions are required regarding the carriage and disposal of the product to landfill. They can placed in an on-site skip with other general building waste.
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