b-panel®/b-deck® is a concrete sandwich panel building system, insulated with fire-retardant b-foam® Expanded Polystyrene (EPS) layer. Offering excellent thermal & acoustic insulation, and exceptional typhoon & earthquake resistance.

**b-panel® / b-deck® benefits:**

1. **Light-weight** : 95 - 145 kg/m²
2. **Rigid - monolithic structure** (all walls act as one unit) highly-resistant against break-ins, typhoon and earthquake, no falling debris during earthquake
3. **Safe during fire** - fire test at National Building Material Testing Centre, Cileunyi : b-panel® 120 minutes 1000°C (BS 476 Part 22 Equivalent) b-deck® 160/180/160 minutes @1000°C w/loading

4. **Cost savings**:
   - Reduced foundation and structural requirement due to lighter weight
   - Modular cutting list, eliminates waste at sites
   - Reduced A/C consumption up to 40%

5. **Rapid and material-efficient installation** with modular cutting list system

www.b-panel.com
b-panel® Products

WALL APPLICATIONS

Versatile - for load bearing wall, partition wall with high hang load requirement, exterior wall
- Thermal insulation: Fire-Retarding (FR) b-foam®
  EPS 0.037W/mK
- Maximum span up to 6 meters without additional columns
- Hang load capacity: approx. 60 Kg per point
- Approx. 145 kg/m² finished, for ANY wall thickness (10-30 cm)

For West or East-facing exterior wall, large temperature gradient wall
- b-panel® made with high-performance carbon-graphite EPS
- Thermal insulation: b-panel Neo® 50 EPS @ 0.035W/mK
- Thermal performance equivalent to regular EPS of >2x density
- German technology

For exterior wall in noisy area, music hall/recording studio partition wall
- b-panel® optimized for sound insulation
- Utilizing especially designed rockwool for maximum quietness.
- Compared to standard b-panel®, improved sound transmission loss by an average of 6 dB between critical 500-4000 Hz frequency

b-wall®
Insulated economic wall solution for non-structural application, suitable for room partition and rapid-build prefabricated homes
- Thickness: 60 mm
- Insulation: b-foam® Fire Retardant (FR) EPS 12 Kg/m³
- Reinforcement: Lightweight steel U36 and U60
- Hanging Load: 40 Kg on reinforcement
- Weight: < 20 Kg/m²
- Finish: 2 x Fiber Cement ready to paint
- Details: tongue and groove

ecolite
Lightweight EPS foam concrete wall panel with fiber cement boards on both sides. Can be used for exterior walls or room partitions
- Lighter than lightweight bricks and red bricks
- Ready to paint surface, no need for plastering and skimcoat
- Competitive cost
- Rapid installation
- Hollow cores ready for electrical/plumbing installation (type 100)
- Panel dimension (cm): 60 x 240, 60 x 300
- Thickness: 60 mm (EL-60); 100 mm (EL-100)
- Weight: 65 Kg/m² (EL-60); 77 Kg/m² (EL-100)
- Surface finish: FCB 4.5 mm

SPECIAL APPLICATIONS

Double Panel
Applications: Main structures, retaining wall, lot boundary/party walls Available final thickness: 20, 22, 24 cm
- Especially designed for high-load main structures, basement wall, and high security wall
- Total thickness starts at 20 cm

Available thickness: 10, 15, & 20 cm
- Shield against sunlight and ambient outside temperature
- Complete thermal insulation, no thermal bridges
- Rapid installation without formwork
- Weight: 125-220 kg/m²
- Maximum span: 8 metres (FP-20)
- Maximum load capacity: 400 kg/m² (FP-20)

Stair Module
- Maximum span: 6 metres.
- Can be customized according to angle, number, and size of steps according to your design

- Very light, less than 1/20 of conventional precast facade
- Significantly reduces building loads, improves earthquake safety
- Pre-finished ready to paint
- Rapid installation without requiring heavy machineries

www.b-panel.com
A new way of constructing - rapid, efficient, and superior end product
• No need for heavy equipment
• Smaller teams, faster completion
• Minimized material waste with cutting list modules

Installation Philosophy

b-panel®

1 Rebar & panel installation
Install rebar on foundation beams, floor slabs, columns and beams, where the panels are to be installed. For steel structures, the rebar are welded onto the steel beams and columns. Tie the panel onto the rebar using tie wire.

2 Wiremesh reinforcement installation
Install cross braces on each corners of door and window openings. Mount U-mesh around the perimeter of door and window openings, and L-mesh for wall corner.

3 Support braces and M/E installation
Install supports, and perform alignment for the panels, so they are installed straight and each plane is perpendicular to each other. Installation of M/E lines by melting part of EPS using heat gun.

4 Plastering
Apply plastering of concrete on both side of the panels using shotcrete method. Afterwards, install guidance and then continue to layer 2 and finishing by skim coat.

b-deck®

1 Support installation
Install the support using wood rafters, bamboo, scaffolding, or hollow pipe along transverse direction of joist (minor beam) every 1 – 1.5 m.

2 Module installation
Set up b-deck® module according to cutting list drawing.

3 Joist rebar installation
Install the rebar (refer to b-deck® load table) using b-deck® joist spacer. Ensure rebar protrude through main beam at 40D depth.

4 Concrete Casting
Set up b-deck® spacer every 1 m, and place the wire-mesh top of the spacer. Install additional formwork to ensure main beams are cast properly.

www.b-panel.com
Wind resistance load table (b-panel®, b-panel Neo®)

<table>
<thead>
<tr>
<th>Desired wall thickness</th>
<th>Panel Thickness</th>
<th>2.00</th>
<th>2.20</th>
<th>2.40</th>
<th>2.60</th>
<th>2.80</th>
<th>3.00</th>
<th>3.20</th>
<th>3.40</th>
<th>3.60</th>
<th>3.80</th>
<th>4.00</th>
<th>4.20</th>
<th>4.40</th>
<th>4.60</th>
<th>4.80</th>
<th>5.00</th>
</tr>
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<tbody>
<tr>
<td>10 cm</td>
<td>4 cm</td>
<td>508</td>
<td>419</td>
<td>350</td>
<td>297</td>
<td>255</td>
<td>220</td>
<td>194</td>
<td>171</td>
<td>152</td>
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<td>83</td>
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<tr>
<td>12 cm</td>
<td>6 cm</td>
<td>613</td>
<td>505</td>
<td>423</td>
<td>358</td>
<td>308</td>
<td>267</td>
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<td>591</td>
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<td>420</td>
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<td>192</td>
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<td>156</td>
<td>141</td>
<td>129</td>
<td>118</td>
<td>108</td>
</tr>
</tbody>
</table>

Max axial force: 4 ton per linear meter

Load Table - Floor Panel

PT BETON ELEMENINDO PUTRA
Factory, Headquarters & Showroom
Jl. Raya Batujajar KM 5 No. 8
Desa Girii Asih Cangkorah, Kab. Bandung Barat
Jawa Barat, Indonesia 40561
Phone. +62 22 686 7077
Fax. +62 22 686 7076
Email. info@b-panel.com

Jakarta Representative Office
Jl. Meruya Ill, Kompleks intercon Plaza
blok F/5 Taman Kebon Jeruk,
Jakarta Barat 11630
Phone. +62 21 2254 1560
Email. info@b-panel.com

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@bfoambpanel betonputra

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