Super 15

It’s not what we put in.
It’s what we take out!

Superior fixing to that of solid block
Easy to handle
Only 18kg
Lighter than traditional solid alternatives
Super 15
It’s not what we put in. It’s what we take out!

The new 140mm Super 15 building block from Besblock has been designed and manufactured with superior fixing, structural stability and easy handling features built-in, and at 18kg* it comes in lighter than its solid counterparts.

Greater Sustainability
Using 15% less material than its solid equivalent, these blocks gain environmental credentials through reduced energy and water usage during manufacture.

Lighter at 18kg*
The block is easier to handle and at just 18kg it’s lighter than its solid counterparts.

Structural Stability
At 3.6N/mm², 5.2N/mm², 7.3N/mm², 10.4N/mm² our rigorous testing dispels common industry misconceptions. The cellular Super 15 has been proven to equal the structural stability of the solid block.

Superior Fixing & Stability
For superior fixing quality, and longer lasting stability the Super 15 is equally strong as its solid equivalent.

Increased Payload
15% more payload reduces environmental impact.

Colour
Super 15 comes in a very soft, light grey that adds pleasing aesthetics to its list of qualities.

For more information contact Besblock Technical Services on 01952 685000

* 18kg is an approximate weight. All information is correct at the time of publishing November 2011.
Technical Specification

Plaster Direct. No special precautions or surface preparations required
Still air trapped in voids dramatically improves thermal and acoustic performance
Wall thickness of 55mm makes for excellent fixing characteristics
Lightweight – sub 20kgs
Solid mortar bed. Blocks should be laid voids down
Available in standard and paint grade textures

**Specification**

- Unit weight at 3% moisture (approx): 18.1 Kg
- Weight / m² laid (approx): 188 Kg/m²
- Net density of unit (approx): 1367 Kg/m³
- Concrete density (approx): 1550 Kg/m³
- Effective Lambda value: 0.369 W/mK
- Thermal resistance: 0.379 m²K/W
- Compressive strength*: 3.6N/mm²; 7.3N/mm²; 10.4N/mm² Category 1
- Void percentage: 15.4%
- Moisture movement: 0.8 mm/m
- Number per pack: 6 m²
- Thickness of shell: 55 mm
- Manufacturing category: BS EN 771-3:2003 Category 1
- Finishes available: Standard & paint grade

Sound Insulation weighted sound reduction index single skin wall

- Blocks laid fair faced both sides: Rw = 49 dB
- Blocks 12.5mm plasterboard on dabs on both sides of the wall: Rw = 52 dB
- Blocks 13mm 2 coat lightweight plaster on both sides of the wall: Rw = 50 dB
- Weighted Sound Absorption Coefficient: 0.3 nW

**Recorded Air Leakage**

<table>
<thead>
<tr>
<th>Block type 140mm “15”</th>
<th>m³·h⁻¹·m⁻²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bare block</td>
<td>3.17</td>
</tr>
<tr>
<td>Painted block</td>
<td>0.072</td>
</tr>
</tbody>
</table>

**Structural Stability 140mm Super 15**

<table>
<thead>
<tr>
<th>Mortar strength class/designation</th>
<th>Comprehensive strength of block (N/mm²)</th>
</tr>
</thead>
<tbody>
<tr>
<td>M12 (i)</td>
<td>3.6 5.2 7.3 10.4</td>
</tr>
<tr>
<td>M6 (ii)</td>
<td>2.90 4.17 5.67 7.3</td>
</tr>
<tr>
<td>M4 (iii)</td>
<td>2.90 4.17 5.40 7.0</td>
</tr>
<tr>
<td>M2 (iv)</td>
<td>2.90 3.67 4.7 5.8</td>
</tr>
</tbody>
</table>

<table>
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<tr>
<th>Characteristic flexural strength fKx, N/mm²</th>
</tr>
</thead>
<tbody>
<tr>
<td>M12 (i)</td>
</tr>
<tr>
<td>M6 (ii)</td>
</tr>
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<tr>
<td>M12 (i)</td>
<td>3.6 0.22 0.22 0.17</td>
</tr>
<tr>
<td>M6 &amp; M4 (ii)</td>
<td>7.3 0.22 0.22 0.11</td>
</tr>
<tr>
<td>M2 (iv)</td>
<td>10.4 0.25 0.25 0.20</td>
</tr>
</tbody>
</table>

**Paint Quality**

The texture remains consistent throughout the manufacture as a result of the aggregate ingredients being batched by volume rather than by weight. (Whilst texture will be consistent, minor colour shade variations may be present).

*Note: The compression test is taken over the whole bed area of the block, including the voids, as if the block were solid.*
Fixing to cellular & hollow blocks

There is a common misconception within industry that solid blocks will accept and provide a stronger and more rigid fixing than will cellular blocks (blocks containing voids).

As one of the UK’s foremost manufacturers of cellular blocks we have always suspected that there is little physical foundation or evidence to support this theory.

Recent comparative tests have been conducted for both Tensile and Shear on 440mm x 215mm x 140mm Besblock Medium Density paint grade blocks in both solid and cellular super 15 formats. M8 Anchor Shield plugs incorporating a projection bolt were used for the tests.

Tensile tests conducted in accordance with the requirements of BS 5080: Part 1: 1993.

Shear tests conducted in accordance with the requirements of BS 5080: Part 2: 1986.

The tests were conducted by CERAM Research Ltd. CERAM is a UKAS accredited laboratory. The face size of the blocks tested was 440mm x 215mm.

The strength of the concrete and its ability to retain fixings will depend on the concrete mix and its cement content. Very importantly however, the efficiency of the block machine and how it vibrates and binds the concrete mix together will determine the final strength performance of the concrete product.

At Besblock we employ American Columbia block machines. These are world renowned for their uncontrolled vibration systems.

Where cellular blocks are being manufactured, case hardened steel core bars will be present in the steel mould box. When the vibration is applied, the concrete mix therein will be forced against the outer constraints of the mould box, but also against the core bars within the mould, thereby receiving compaction from 4 sides.

As a result, the concrete contained in the cellular block will have greater density than its equivalent in solid format thereby providing greater strength.

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