

# Masterlite Pro product information



BES6001-2008



A range of high strength, robust, load bearing units for use in either internal or external walls.

- Available in solid format with a standard strength of 3.6N/mm<sup>2</sup> and 7.3N/mm<sup>2</sup>
- 10.4 N/mm<sup>2</sup> blocks are available subject to order
- Masterlite Pro blocks are available in standard and paintgrade finishes for various applications and total flexibility
- For use internally and externally, both above and below dpc (7.3 and 10.4N/mm<sup>2</sup> only)

## Applications

Suitable for use above and below dpc both internally (3.6 N/mm<sup>2</sup>) and externally (7.3 N/mm<sup>2</sup> and 10.4 N/mm<sup>2</sup>).

Units of 7.3 N/mm<sup>2</sup> are suitable for use in beam and block floors.

Masterlite Pro blocks are also suitable for use in Robust Detail wall types E-WM- 1, 4, 8, 11, 14 and 17.

**Standard** - Suitable for locations where the surface will not be seen i.e. plastered or rendered.

**Paintgrade** - (7.3 N/mm<sup>2</sup>) Suitable for locations where a consistent close textured face is required, suitable for direct decoration (note only one face and one end guaranteed).

## Performance

### Dimensional tolerances

Category D1

### Mean unit strength:

Solid 3.6, 7.3 and 10.4 N/mm<sup>2</sup>

### Net dry density:

All strengths 1450 kg/m<sup>3</sup>

### Thermal conductivity (W/mK):

All strengths Internal 0.60  
External 0.64

Based on tabulated values from BS EN 1745

### Water vapour diffusion coefficient:

All strengths 5/15

Based on tabulated values from BS EN 1745

### Moisture movement:

All strengths <0.8mm/m

### Reaction to fire:

Classification to EN 13501-1 A1

### Durability:

Based on tabulated values from BS 5628-3 table 12  
3.6N/mm<sup>2</sup> not to be exposed  
7.3 N/mm<sup>2</sup> (frost resistant)

### Bond strengths:

Based on tabulated values from BS EN 998-2 Annex C  
0.15N/mm<sup>2</sup>

## Masterlite Pro

Size (mm)	440x215	440x215	440x215	440x215	440x215
Thickness (mm)	75	100	140	190	215
Density	1450	1450	1450	1450	1450
Weight	10.6	14.1	19.8	26.8	30.4
Units/m <sup>2</sup>	9.88	9.88	9.88	9.88	9.88
No per pack	88/96	72	48	40	32
M <sup>2</sup> /pack	8.8/9.6	7.2	4.8	4.0	3.2
Pack weight (T)	1.02	1.02	0.95	1.07	0.97
Colour	Natural	Natural	Natural	Natural	Natural
Finish	Std and P/G	Std and P/G	Std and P/G	Std and P/G	Std and P/G

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**Table 1 - Thermal resistance**

Width (mm)	Density	Thermal resistance (m <sup>2</sup> K/W)	
		3%	5%
75	Solid	0.125	0.117
100	Solid	0.167	0.156
140	Solid	0.233	0.219
190	Solid	0.317	0.297
215	Solid	0.358	0.336
100	Brick	0.125	0.156

**Table 2 - Unit weights**

Width (mm)	Form	Unit weight* (kg)	Built weight (kg/m <sup>2</sup> )
100	Solid	14.1	151
140	Solid	19.8	212
190	Solid	26.8	287
215	Solid	30.4	326
100	Brick	2.1	155

Based upon 3% moisture content by volume.

**Table 3 - Fire resistance (hours)**

Width	Form	Fire resistance (hours)	
		Load bearing	Non load bearing
75	Solid	N/A	1
100	Solid	2	2
140	Solid	2	3
190	Solid	2	4
215	Solid	2	6
100	Brick	2	2

Above values assume worst case, class 2 aggregate, single leaf, no finishes. (based upon BS5628 - 3)

**Table 4 - Sound insulation\***

Width	Form	Rw dB
75	Solid	40
100	Solid	42
140	Solid	44
190	Solid	46
215	Solid	46
100	Brick	42

\*Based upon mass law calculation assuming plastered or painted both sides.

**Table 5 - Characteristic strength  $f_k$  factors (N/mm<sup>2</sup>)**

Width	Form	Compressive strength of units		
		3.6	7.30	10.50
75	Solid	3.5	6.40	8.20
100	Solid	3.5	6.40	8.20
140	Solid	2.90	5.34	6.84
190	Solid	2.38	4.41	5.66
215	Solid	2.21	4.11	5.27

Values based upon BS5628 - 1, assuming M4/type III mortar.

# Masterlite Pro product information

## Manufacturing standards

The Masterlite Pro range is manufactured using a semi-dry process and is compliant to European Standard BS 771-3 and complies with Category 1 masonry units.

All Aggregate Industries' products are manufactured in accordance with ISO 9001 with factory compliance to ISO 14001.

## Sustainability and local sourcing

**Energy use:** Aggregate Industries is at the forefront of sustainability and has committed to reduce carbon emissions by 20% by 2012 based on a base line.

**Recyclable:** 100% of the product can be recycled thus reducing the amount of material that is sent to landfill.

**Manufacturing location:** produced in the UK, with locally sourced materials under strict environmental and social legislation, for local supply.

**Responsible sourcing:** Aggregate Industries is the first company in the world to achieve a BES 6001:2008 Responsible Sourcing Certificate from BRE Global. Products are assessed on:

- quality management
- environmental management
- health and safety management
- greenhouse gas emissions
- minimising raw material usage
- labour practise
- biodiversity
- community engagement.

## Generic Green Guide rating

Outer leaf	Inner leaf	Finish and relevant green guide rating	
		Plaster and paint	Plasterboard and paint
Brick	Masterlite Pro	A+	A+
Render on Masterlite Pro	Masterlite Pro	A+	A+
OPC/Lime render on Masterdenz	Masterlite Pro	A+	A+

Ratings based upon generic green guide values (2009) supplied by BRE Global Ltd, [www.thegreenguide.co.uk](http://www.thegreenguide.co.uk)

## Key aggregates and recycled content

Locally sourced aggregates.

## Policies

Aggregate Industries' policies on the environment and community, health and safety and sustainable solutions for different product applications can be viewed on our website [www.aggregate.com](http://www.aggregate.com)

## Installation standard

**Plastering/Rendering:** Masterlite blocks provide a moderate to low suction background and require the joints to be raked back and a spatter dash coat applied prior to rendering. When plastering, either carlite bonding or hardwall plaster or similar should be used.

**Health and safety:** Manual handling legislation and guidance given in construction sheet number 37, for repetitive manual handling recommends units below 20kg should be considered.

## Maintenance and cleaning

Masterblock can supply on request advice on general maintenance.

## COSHH data

Full COSHH data on Masterblock products is available on request. Please call the Technical helpline on 01285 646800.

## Technical support

Detailed guidance and assistance with the preparation of specification and use of Masterblock products is available through the sales office. A free technical design service is also available.

**For further information, please refer to Masterblock technical services on 01285 646800.**

Carnforth, Lancashire Tel: 01524 736636 Fax: 01524 736635  
Croft, Leicester Tel: 01455 285670 Fax: 01455 285206  
North End, Wiltshire Tel: 01285 646900 Fax: 01285 646949  
Melbur, Cornwall Tel: 01726 862222 Fax: 01726 862229  
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[www.masterblock.co.uk](http://www.masterblock.co.uk)

  
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