

# Masterlite Ultra product information



BES6001:2008



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A low weight block designed for thermal efficiency and manual handling considerations.

- A range of lightweight, robust, load bearing units manufactured using Class 1 aggregate for fire resistance
- Provides an excellent key for plastering and rendering
- Masterlite Ultra was developed specifically to be used as a one handed lift
- Available in solid format

## Applications

Suitable for use above and below dpc internally and above dpc externally. These units are not tested for transverse loading and as such, are NOT suitable for beam and block flooring.

Masterlite Ultra blocks cannot be used in party walls and are restricted for use in flanking wall types E-WM-2, E-WM-4 and E-WM-11 (medium density) when using robust details.

- **Standard** – Suitable for locations where the surface will not be seen, ie plastered or rendered.

## Manufacturing standards

The range is manufactured using a semi-dry process and is compliant to 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.

## Performance

### Dimensional tolerance

Category D1

### Mean unit strength:

Solid 3.6 N/mm<sup>2</sup>

### Net dry density:

850 kg/m<sup>3</sup>

### Thermal conductivity:

Internal 0.29 W/mK

External 0.32 W/mK

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

<0.8mm/m

### Reaction to fire:

Classification to EN 13501-1 A1

### Durability:

Based on tabulated values from BS 5628-3 table 12 - Not to be left exposed

### Bond strength:

0.15N/mm<sup>2</sup>

Based on tabulated values from BS EN 998-2 Annex C

## Masterlite Ultra

Size (mm)	440x215	440x215	440x215
Thickness (mm)	100	140*	190*
Density	Lightweight	Lightweight	Lightweight
Weight (kg)	8.28	11.60	15.74
Units/m <sup>2</sup> (approx)	9.88	9.88	9.88
No. per pack	72	48	40
M <sup>2</sup> /pack (approx)	7.2	4.8	4.0
Pack weight (T)	0.60	0.56	0.63
Colour available	Natural	Natural	Natural
Finish	Standard	Standard	Standard

\* Special order only

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**Table 1 - Thermal resistance**

Width (mm)	Density	Thermal resistance (m <sup>2</sup> K/W)	
		3%	5%
100	solid	0.345	0.312
140#	solid	0.483	0.437
190#	solid	0.655	0.594

**Table 2 - Unit weights**

Width (mm)	Form	Unit weight* (kg)	Built weight (kg/m <sup>2</sup> )
100	solid	8.28	94
140#	solid	11.60	131
190#	solid	15.74	178

\*based upon 3% moisture content by weight.

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

Width	Form	Load bearing	Non load bearing
100	solid	2	4
140#	solid	3	4
190#	solid	6	6

\*Above values assume, single leaf, 13mm plaster both sides (based upon BS5628 – 3, table 14).

**Table 4 - Sound insulation\***

Width	Form	Rw dB
100	solid	39
140#	solid	41
190#	solid	43

\*Based upon mass law calculation, assuming plaster both sides

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

Width	Form	Compressive strength of Units (N/mm <sup>2</sup> ) 3.6
100	solid	3.5
140#	solid	2.90
190#	solid	2.38

Based upon BS 5628 pt 1, M4 / Type III mortar.

# To special order only.

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## 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.

## Key aggregates and recycled content

Locally sourced aggregates.

## Generic Green Guide ratings

Outer leaf	Inner leaf	Finish and relevant green guide rating	
		Plaster and paint	Plasterboard and paint
Brick	Ultra	A+	A+
Render on Ultra	Denz	A+	A+
Render on Denz	Ultra	A+	A+

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

## 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 Ultra blocks provide a moderate suction background and due to its granular texture, can receive render directly. When plastering, either carlite browning or hardwall plaster or similar should be used.

**Health and safety:** Masterlite Ultra can be specified upto and including 190mm thick and still comply with the HSE guidance contained in construction sheet 37, which recommends restricting block weights to 20kg or below for repetitive laying of masonry units.

## 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  
Kemnay, Scotland Tel: 01467 651000 Fax: 01467 642342

[www.masterblock.co.uk](http://www.masterblock.co.uk)



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