

MASTERDENZ ECO



Minimum 20%[†]
Non primary materials

30% reduction in embodied CO₂
compared to standard blocks

A brand new environmentally friendlier range of made to order, high strength, robust, load bearing units. Through improvements in the manufacturing and design mix the Masterdenz ECO blocks are produced using a 30% reduction in embodied CO₂ than our Masterdenz blocks while also containing a minimum of 20% non-primary materials. Masterdenz ECO blocks are suitable for use in either internal or external walls offering total flexibility.

- ▶ Environmentally engineered to meet the demands of today's society
- ▶ 20% minimum non-primary material content
- ▶ Raw materials used are specifically selected for their environmental performance and the products comply with all European and UK technical standards
- ▶ For use internally and externally

APPLICATIONS

Suitable for use above and below dpc, both internally and externally.

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

MANUFACTURING STANDARDS

The Masterdenz ECO range is manufactured using a semi-dry process and is compliant to European Standard BS EN 771-3 and complies with Assessment and Verification of Constancy of Performance (AVCP) system 4, Category II masonry units.

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

[†]Represents non-primary material within the complete mix design.

PERFORMANCE

Dimensional tolerances	
Category	D1
Mean unit strength	
Solid	7.3 N/mm ²
Net dry density	
All strengths	1950 kg/m ³
Thermal conductivity (W/mK)	
All strengths*	Internal 1.06, External 1.14
Water vapour diffusion coefficient μ	
All strengths*	5/15
Moisture movement	
All strengths	<0.6mm/m
Reaction to fire	
Classification to EN 13501-1	A1
Durability	
Based on tabulated values in accordance with table 15, PD 6697:2010 (frost resistant)	
Bond strengths	
Based on tabulated values from BS EN 998-2 Annex C 0.15 N/mm ²	

*Based on tabulated values from BS EN 1745

Masterdenz eco

Size (mm)	440x215	440x215
Thickness (mm)	100	140
Density (kg/m ³)	1950	1950
Weight (kg)	18.73	26.22
Units/m ² (approx.)	9.88	9.88
Colour available	Natural	Natural
Finish	Standard	Standard

TABLE 1 - THERMAL RESISTANCE

Width (mm)	Form	Thermal Resistance (m ² K/W)	
		3%	5%
100	Solid	0.094	0.088
140	Solid	0.132	0.123

TABLE 2 - UNIT WEIGHTS

Width (mm)	Form	Unit Weight (kg)	Built Weight (kg/m ²)
100	Solid	18.73	197
140	Solid	26.22	276

Based upon 3% moisture content by volume.

TABLE 3 - FIRE RESISTANCE (HOURS)

Width (mm)	Form	Load Bearing*	Non Load Bearing
100	Solid	2	3
140	Solid	3	>4

Table above is based upon BS EN 1996-1-2 : 2005, single leaf wall with no finishes.

*Assumed >0.6 of the permitted load capacity is being used.

TABLE 4 - SOUND INSULATION

Width (mm)	Form	Rw dB
100	Solid	43
140	Solid	45

Based upon mass law calculation assuming plastered both sides.

SUSTAINABILITY AND LOCAL SOURCING

ENERGY USE AND GREENHOUSE GAS EMISSIONS

Aggregate Industries is at the forefront of sustainability and has committed to reducing both energy and greenhouse gas intensity 5% year-on-year.

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 accreditation to the BES 6001 Framework Standard for the Responsible Sourcing of Construction Products. Aggregate Industries has achieved an 'Good' rating for major product groups. The BES 6001 standard assesses.

- ▶ Quality management
- ▶ Environmental management
- ▶ Health and safety management
- ▶ A range of social and environmental issues.

LIFE

Life is our range of sustainable products and services.

For more information please visit www.aggregate.com/life

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

INSTALLATION STANDARD

Masterdenz ECO units 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 Thistle Bonding or Hardwall plaster or similar should be used.

MAINTENANCE AND CLEANING

Aggregate Industries can supply on request advice on general maintenance.

COSHH DATA

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

HEALTH & SAFETY

Manual handling legislation and guidance given in construction sheet number 37, for repetitive manual handling recommend units below 20kg should be considered.

TECHNICAL SUPPORT

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

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

GENERIC GREEN GUIDE RATINGS FOR EXTERNAL CAVITY WALLS**

Outer leaf	Inner leaf	Finish and relevant green guide rating	
		Plaster and paint	Plasterboard and paint
Brick	Masterdenz ECO	A+	A+
*Render on Masterdenz ECO	Masterlite Pro ECO	A+	A+
*Render on Masterlite Pro ECO	Masterdenz ECO	A+	A+

** Based upon the generic Green Guide April 2009

* Assumes the use of OPC/Lime mortar and OPC/Lime render Ratings based upon generic Green Guide values supplied by BRE Global Ltd, www.thegreenguide.co.uk

CONTACT US

Aggregate Industries
Ashton Keynes, Swindon
Wiltshire, SN6 6QP
Tel: 01285 646900
Fax: 01285 646949
www.aggregate.com

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