



# Wi SLOT BLOCK DATASHEET

**A range of paint grade medium density concrete blocks with a unique slotted design for superior performance – the Wi Slot Block.**

The patented vertical slots lead to many advantages over traditional solid or hollow format concrete blocks. The Wi Slot Block is available in 100, 140, 190 and 215mm widths.

**Key Benefits**

- Unique, purpose designed slots improve the chemical and mechanical bond with mortar, aiding flexural and shear strength
- Design and increased bond reduces propensity to shrinkage, enabling longer spans between movement joints
- Approximately 12.5% lighter than equivalent density solid blocks – reduces average lifting by 300kg a day per man
- Compliant with CDM manual handling guidelines
- Integral component of the Wi System

**Applications**

The Wi Slot Block is intended for the construction of load-bearing and non-loadbearing walls and is suitable for all forms of masonry construction.

**Appearance and Configuration**

The blocks are manufactured from specially selected and prepared lightweight aggregates, giving a grey, close-textured finish. They feature a recess to one end and slots of defined size and purpose.

**Authority**

The Wi Slot Block range conforms to BS EN 771-3 and is manufactured under a Quality Management System complying with ISO 9001. The blocks meet Category 1, Manufacturing Control, as specified in BS EN 1996-1-1: 2005.



**Sizes and Tolerances**

Face dimensions are 440mm x 215mm; widths are: 100mm, 140mm, 190mm and 215mm. The blocks comply with Tolerance Category D1 of EN 771-3.

**Technical Properties**

Properties	100	140	190	215
Mean compressive strength	7.3 N/mm <sup>2</sup>			
Net dry density of concrete	1450 kg/m <sup>3</sup>			
Unit weight (kg)	12.7	17.8	21.8	23.6
Laid weight (kg/m <sup>2</sup> )	138	193	238	258
Thermal conductivity @ 3% moisture content (W/mk)	0.46			
Reaction to fire	Classification to EN 13501-1:A1			

Note: unit and laid weights are approximate and calculated based on the specified dry density and moisture content.

**Technical Performance**

Typical fire resistance for the Wi Slot Blocks are based on the National Annex to BS EN 1996: (Parts 1 & 2)

Block Size	Single leaf no applied finish	
	Loadbearing wall	Non-loadbearing wall
100	2 hrs	4 hrs
140	3 hrs	4 hrs
190	6 hrs	6 hrs
215	6 hrs	6 hrs

Note: the application of plaster will extend the period of fire resistance.

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## Estimated Sound Reduction

The sound reduction of the Wi Slot Block has been assessed and indicated in the table below:

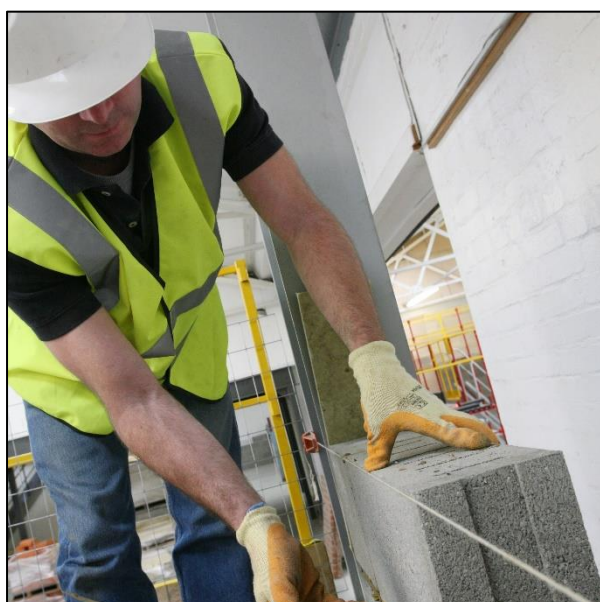
Block Size	No finish other than paint	Drylined Both sides	Plastered Both sides
	Decibels (dB)		
100	43	44	44
140	48	48	49
190	51	52	52
215	52	53	53

## Design

The design of loadbearing and non-loadbearing walls should be in accordance with the recommendations of BS 8103: Part 2, BS EN 1996:1-1: 2005 and the relevant requirements of the Building Regulations.

## Installation

The construction of walls should be in accordance with BS EN 1996: (1-1: 2005, 1-2: 2005) and 2: 2006) and normal good practice. For use above DPC, the blocks should be laid using mortar strength class M4. Below DPC level strength class M4, or M6, can be used depending on the risk of freezing/saturation.



## Recycled Content

Wembley Innovation seek to increase the recycled content of our products, without comprising quality, when feasible.



## Sustainability and Environment

By working closely with our suppliers and manufacturers, Wembley Innovation constantly strive to improve our approach to sustainability. This includes employing rail transport wherever possible thus minimising lorry movements, reducing dependency on quarried virgin aggregates and maximising the use of waste, reclaimed or recycled materials.

An independent carbon footprint assessment by the University of Greenwich in July 2015 determined that when the Slot Block is used within the Wi System, carbon savings of 23.6% are achieved, compared to traditional blockwork and steel windpost techniques.

Wembley Innovation are committed to the compliance requirements of BES 6001, ISO 9001, ISO 14001, OHSAS 18001/ ISO 45001 and CE Certification.

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