HI 7 COURSING BLOCK

Technical Datasheet

V1 03/24

PRODUCT APPLICATIONS

BLOCK WIDTH	CAVITY WALLS EXTERNAL LEAF BELOW DPC	CAVITY WALLS EXTERNAL LEAF ABOVE DPC	CAVITY WALLS INNER LEAF BELOW DPC	CAVITY WALLS INNER LEAF ABOVE DPC	SOLID EXTERNAL WALLS BELOW DPC	SOLID EXTERNAL WALLS ABOVE DPC	SEPARATING WALLS	INTERNAL PARTITIONS	BEAM & BLOCK FLOORS	SUITABLE FOR RENDERING
100mm	✓ 1, 2	✓ 3	✓ 1	✓	✓ 1, 2	✓ 3	✓ 6	✓ 6	✗ 7	✓
140mm	✓ 1, 2	✓ 3	✓ 1	✓	✓ 1, 2	✓ 3	✓ 6	✓ 6	✗ 7	✓

Notes:

1. Product suitability in this application is subject to the block achieving the sites soil / groundwater DS classification requirements.
2. Blocks in the external leaf from dpc level to 150mm below ground level must not be left exposed, suitable products such as clay bricks of Class B Engineering properties or "F2" durability in accordance with BS EN 771-1 should be specified in this zone, alternatively blocks may be covered with a suitable protective finish.
3. For all external leaf applications, the block requires a suitable impervious coating or finish applied, blocks must not be left exposed when used on the external leaf.
4. A traditional cement / sand render should not be applied to a Thermalite Turbo block. If a technical render system is proposed, the advice of the render system manufacturer should be sought to confirm block suitability.
5. This product is designed to be used in conjunction with another masonry unit which provides structural support to it i.e. behind a brick plinth. They should not be used to construct single leaf walls (load bearing or non-load bearing) on their own due to structural stability reasons.
6. Product suitability in this application is subject to the block achieving the walls specification requirements for sound reduction or those specification criteria set in the Robust Detail selected.
7. For beam and block infill applications, only the Thermalite Floor block can be used.
8. The declared properties are based on the block being laid in their intended orientation i.e. face size (L x H) and thickness stated on this technical data sheet. Please contact Forterra for further information before using the block in a different orientation.
9. Estimated figure only, tested values are generally 1 - 3 dB lower.

Products should be designed and constructed in accordance with all relevant Legislation, Building Regulations, European & British Standards, Acts, Codes of Practice and manufacturers recommendations.

Please refer to Building Regulations, Approved Document A and the Projects Structural Engineer for minimum wall thickness, block compressive strength and characteristic strength requirements - specification varies subject to numerous factors which include loading, block orientation, restraint, wall height and length.

Block weights based on gross density plus 50kg/m³ @ 23% moisture content (typical received), moisture equilibrium approximately 3% (protected) and 5% (exposed).

NPD No performance declaration - please contact Forterra for further information.

* Manufactured to special order only.

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PRODUCT TECHNICAL PROPERTIES

Blocks are manufactured to BS EN 771-4.

Material Properties			
Thickness (mm):	100		140
Face Sizes – L x H (mm):		440 x 65	
Dimension Tolerance Classification:		GPLM	
Dimension Tolerance – Length:		(+3mm -5mm)	
Dimension Tolerance – Height:		(+3mm -5mm)	
Dimension Tolerance – Width:		(+3mm -3mm)	
Unit Weight, Gross Density + 50kg/m³ @ 23% Moisture (kg):	2.7		3.8
Configuration:		Group 1 (Solid)	
Category:		II	
Mean Compressive Strength (N/mm²):		7.3[8]	
Gross Dry Density (Kg/m³):		730	
Thermal Conductivity - λ10, dry unit, S2 (W/m.K)		0.16	
Design Thermal Conductivity - Protected (3%) (W/m.K):		0.18	
Design Thermal Conductivity - Exposed (5%) (W/m.K):		0.2	
Design Thermal Conductivity - Below Dpc Level (W/m.K):		NPD	
Thermal Resistance - Protected (3%) (m².K/W):	0.556		0.778
Thermal Resistance - Exposed (5%) (m².K/W):	0.5		0.7
Sound Reduction – Un-finished (RW dB):	42.3[9]		46.3[9]
Fire Resistance (Hours) (NA to BS EN 1996-1-2) – Non-load Bearing Single Leaf walls (Criteria EI):		NPD	
Fire Resistance (Hours) (NA to BS EN 1996-1-2) – Load Bearing Single Leaf walls (Criteria REI) α≤ 1.0: Load Bearing Single Leaf walls (Criteria REI) α≤ 0.6:		NPD NPD	
Reaction to Fire (BS EN 13501):		A1	
Water Vapor Permeability:		5/10	
Dimensional Stability - Moisture Movement (mm/m):		nominal 0.5	
Vapour Resistivity (MN.s/g.m):		50	
Soil or Groundwater DS Classification:		DS1, DS2, DS3	
Shear Bond Strength (N/mm²):		0.15	
Third Party Certification:		Yes (BBA Certificate 00/3720 - Product Sheet 1)	
Movement Joint Detail		Vertical movement joints at 6m centres and not more than half that spacing from a corner	

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THERMALITE

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