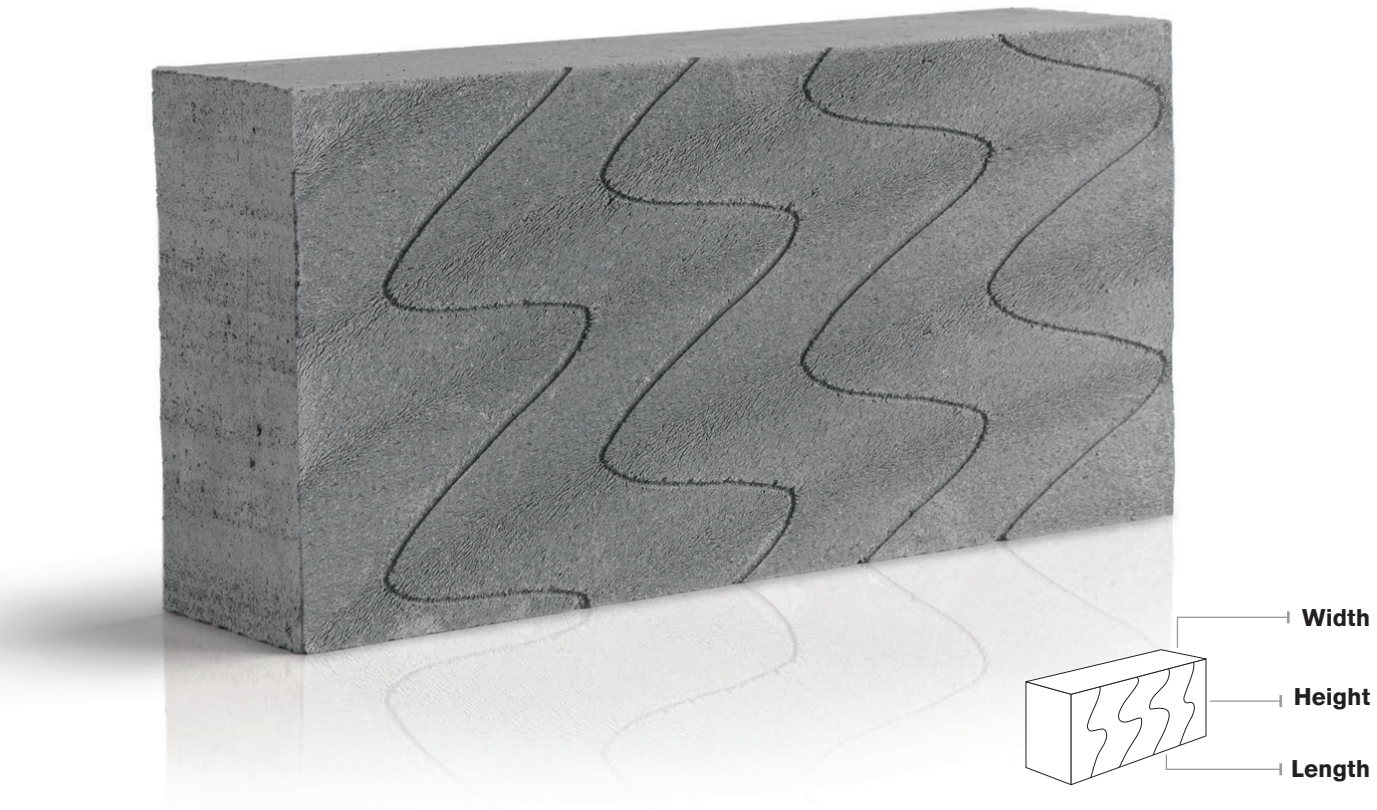
TECHNICAL DATA SHEET

HI-STRENGTH 7 BLOCK

THERMALITE

a **Forterra** brand



VIEW PRODUCT ONLINE

STRENGTH YOU CAN BUILD ON

Thermalite Hi-Strength 7 Block combines high compressive strength (7.3N/mm^2) with the practical handling characteristics associated with aircrete.

With a design thermal conductivity (protected, 3%) of 0.185 W/m^{2}K, these blocks help building designers achieve target U-values. An A1 reaction to fire classification and 41-50dB sound reduction performance (depending on block thickness) support residential construction requirements.

Thermalite is recognised as a pioneer of aircrete with its closed micro-cellular structure – formed of millions of tiny, trapped air pockets – which allow for lightweight handling and a favourable strength-to-weight ratio.

Manufactured to BS EN 771-4, compliant with Masonry Wall Robust Details, and supporting Approved Documents Part A, B, E and L, **Thermalite** keeps programmes on track with straightforward builds and smooth inspections.

KEY FACTS

(based on 440x215x100 block)

Compressive Strength:	7.3 N/mm^2
Weight:	9.1kg/block
Thermal Performance: Protected (3%)	0.185 W/m.K
Reaction to fire: BS EN 13501	A1

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PRODUCT APPLICATION

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 FLOORING INFILL
100mm	✓ Φ ϑ	✓ Ϫ	✓ Φ	✓	✗	✗	✓ Ж	✓ Ж	✗ ‼
140mm	✓ Φ ϑ	✓ Ϫ	✓ Φ	✓	✗	✗	✓ Ж	✓ Ж	✗ ‼
150mm	✓ Φ ϑ	✓ Ϫ	✓ Φ	✓	✗	✗	✓ Ж	✓ Ж	✗ ‼
190mm	✓ Φ ϑ	✓ Ϫ	✓ Φ	✓	✗	✗	✓ Ж	✓ Ж	✗ ‼
200mm	✓ Φ ϑ	✓ Ϫ	✓ Φ	✓	✗	✗	✓ Ж	✓ Ж	✗ ‼
215mm	✓ Φ ϑ	✓ Ϫ	✓ Φ	✓	✓ Φ ϑ	✓ Ϫ	✓ Ж	✓ Ж	✗ ‼

SPECIAL ORDER — Lead times may be extended and subject to minimum order quantity.

NOTES:

Φ Product suitability in this application is subject to the block achieving the sites soil / groundwater DS classification requirements.

ϑ 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.

Ϫ 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.

Ж 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.

‼ For beam and block infill applications, only the Thermalite Floor block can be used.

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.

If you are considering applying a render or cladding, please contact the finish supplier for block/brick suitability.

Block weights based on gross density @ 23% moisture content, moisture equilibrium approximately 3% (protected) and 5% (exposed).

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PRODUCT TECHNICAL DATA

SPECIAL ORDER
Lead times may be extended and subject to minimum order quantity

Width (mm):	100	140	150	190	200	215
Face Sizes – L x H (mm):	440 x 215	440 x 215	440 x 215	440 x 215	440 x 215	440 x 215
Dimensional Tolerance Classification:	GPLM	GPLM	GPLM	GPLM	GPLM	GPLM
Dimensional Tolerance – Length:	(+3mm -5mm)	(+3mm -5mm)	(+3mm -5mm)	(+3mm -5mm)	(+3mm -5mm)	(+3mm -5mm)
Dimensional Tolerance – Height:	(+3mm -5mm)	(+3mm -5mm)	(+3mm -5mm)	(+3mm -5mm)	(+3mm -5mm)	(+3mm -5mm)
Dimensional Tolerance – Width:	(+3mm -3mm)	(+3mm -3mm)	(+3mm -3mm)	(+3mm -3mm)	(+3mm -3mm)	(+3mm -3mm)
Block Weight, Gross Density @ 23% Moisture (kg):	8.5	11.9	12.7	16.1	17.0	18.3
Configuration:	Group 1 (Solid)	Group 1 (Solid)	Group 1 (Solid)	Group 1 (Solid)	Group 1 (Solid)	Group 1 (Solid)
Category:	II	II	II	II	II	II
Mean Compressive Strength (N/mm^2): 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.	7.3	7.3	7.3	7.3	7.3	7.3
Gross Dry Density (Kg/m^3):	730	730	730	730	730	730
Thermal Conductivity - λ10, dry unit, S2 (W/m.K)	0.160	0.160	0.160	0.160	0.160	0.160
Design Thermal Conductivity - Protected (3%) (W/m.K):	0.185	0.185	0.185	0.185	0.185	0.185
Design Thermal Conductivity - Exposed (5%) (W/m.K):	0.20	0.20	0.20	0.20	0.20	0.20
Design Thermal Conductivity - (15%) (W/m.K):	0.30	0.30	0.30	0.30	0.30	0.30
Thermal Resistance - Protected (3%) ($m^2.K/W$):	0.54	0.75	0.81	1.02	1.08	1.16
Thermal Resistance - Exposed (5%) ($m^2.K/W$):	0.5	0.7	0.75	0.95	1	1.07
Sound Reduction: Sound Reduction - Calculated based on unfinished. On-site testing values may be lower.	41.2	45.3	46.1	48.9	49.6	50.4
Fire Resistance (Hours) (NA to BS EN 1996-1-2) – Non-load Bearing Single Leaf walls (Criteria EI):	4	4	4	4	4	4
Fire Resistance (Hours) (NA to BS EN 1996-1-2) – Load Bearing Single Leaf walls (Criteria REI) ≤ 0.7:	2	3	4	4	4	4
Load Bearing Single Leaf walls (Criteria REI) ≤ 0.42:	2	3	4	4	4	4
Reaction to Fire (BS EN 13501):	A1	A1	A1	A1	A1	A1
Water Vapor Permeability:	5/10	5/10	5/10	5/10	5/10	5/10
Dimensional Stability - Moisture Movement (mm/m):	nominal 0.5	nominal 0.5	nominal 0.5	nominal 0.5	nominal 0.5	nominal 0.5
Vapour Resistivity (MN.s/g.m):	50	50	50	50	50	50
Soil or Groundwater DS Classification:	DS1-4	DS1-4	DS1-4	DS1-4	DS1-4	DS1-4
Shear Bond Strength (N/mm^2):	0.15	0.15	0.15	0.15	0.15	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					

Blocks are manufactured to BS EN 771-4. NPD denotes 'No Performance Declaration'; please contact Forterra for further information.

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Valid at the time of publication. Please check our website (www.forterra.co.uk) for the latest product information and documentation. For previous versions please contact us.

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