



INSULITE COURSING BRICKS

Medium Dense Coursing Units

Insulite Coursing Bricks are coursing units designed to be used in conjunction with Thomas Armstrong's low and medium dense aggregate concrete blocks. This maintains material continuity throughout the wall and reduces the need for cutting down whole blocks. At 65mm high, they are available in 100mm and 140mm widths.

Insulite bricks and blocks are manufactured to BS EN 771-3 and are ISO 9001 Quality Assured, ISO 14001 Environmentally Certified and hold BES 6001 'Excellent' Responsible Sourcing.

TECHNICAL PROPERTIES

Property	Value
Face Size (BS EN 771-3):	65mm x 215mm
Dimensional Tolerance (BS EN 772-16):	Category D1
Gross Dry Density (BS EN 772-13):	1450 - 1550 kg/m ³
Mean Compressive Strength (BS EN 772-1):	7.3 & 10.4 N/mm ²
Manufacturing Category (BS EN 771-3):	Category II
Thermal Conductivity (BS EN 1745):	1.17 W/mK [inner leaf] 1.26 W/mK [outer leaf]
Moisture Movement (BS EN 772-14):	< 0.6 mm/m
Fire Resistance (BS EN 13501-1):	Class A1 reaction to fire
Configuration (BS EN 1996-1-1):	Solid - Group 1
Available Texture, Finish:	Standard



APPLICATIONS

- Manufactured to BS EN 771-3.
- Inner & outer leaf of external cavity walls. Not suitable for unfinished external applications.
- Internal partition walls.
- Acoustic separating party walls to Part E of the Building Regulations and Robust Details.
- Standard texture finish provides an excellent surface for mortars, renders and plasters.
- Robust, accepts most standard fixings.

PHYSICAL PROPERTIES & PACK DETAILS

Block Width mm	Blocks per pack	Block Weight kg	m ² per pack	Blocks per m ²	Pack Details
100	520	2.3	8.67	60	Non-void pack on wooden pallets
140	312	2.9	5.20	60	Non-void pack on wooden pallets
100	464	2.3	7.73	60	Voided pack

- The block weights quoted are approximate and include the typical additional weight from the moisture content.
- The m² figures include the conventional 10mm mortar joint.
- Pack details may vary slightly between manufacturing locations. Always check details with your nearest sales office.

Acoustic

Insulite Coursing Bricks are suitable for use in acoustic separating party walls between dwellings and for internal partitions in accordance with Part E of the Building Regulations. They are also suitable for a range of Robust Standard Detail party walls.

Below Ground

All of our medium dense aggregate and dense concrete blocks are durable products which are suitable for use in soil conditions up to Design Sulphate class DS-3 as defined in BRE Digest Special Digest 1.

Fire Resistance

Insulite blocks are non-combustible with zero spread of flame and are classed as Class 'A1' in accordance with BS EN 13501-1. Notional fire resistance periods are:

Block mm	Loadbearing Wall		Non-loadbearing Wall	
	No Finish	VG Plaster	No Finish	VG Plaster
100	2 hours	4 hours	4 hours	4 hours
140	3 hours	4 hours	4 hours	4 hours

"VG" = vermiculite gypsum plaster or perlite plaster 13mm thick applied to both faces of single leaf walls.

Mortars

Insulite Brick surfaces offer an excellent surface for accepting mortars and no pre-treatment is required other than ensuring that all dirt and debris is removed. Generally, in order to avoid unsightly cracking, the weakest mortar mixture appropriate to the structural requirements should be selected as per BS 5628-3. For most applications, we recommend that grade iii mortar is used.

BS 5628-3 Mortar Class		Recommended mix proportions of materials by volume (as per BS 5628-3)	
Above dpc	iii	1 : 1 : 5 to 6 1 : 5 to 6 1 : 4 to 5 1 : 3½ to 4	Cement : Lime : Sand Cement : Sand Masonry Cement : Sand (with non-lime filler) Masonry Cement : Sand (with lime filler)
	iii	<i>A stronger (class ii) mix is preferred - see below</i>	
Below dpc	ii	1 : ½ : 4 to 4 1 : 3 to 4 1 : 2½ to 3½ 1 : 3½ to 4	Cement : Lime : Sand Cement : Sand Masonry Cement : Sand (with non-lime filler) Masonry Cement : Sand (with lime filler)

External Rendering

Insulite Coursing Bricks have a surface which provides an excellent key for adhesion. These blocks have low - moderate suction and no special pre-treatment of the wall is required other than ensuring that all dirt and debris is removed from the surface.

Traditional renders should be applied in 2 coats. The first coat should not exceed 15mm and the second coat should be 5 to 7mm thick. The first coat should be slightly stronger than the second coat. Render designation iii/M4 should be used, recommended proportions:

Cement : Lime : Sand With or without air entrainment	Cement : Sand With or without air entrainment	Masonry Cement : Sand With non-lime filler	Masonry Cement : Sand With lime filler
1 : 1 : 5 or 6	1 : 5 or 6	1 : 4 or 5	1 : 3½ to 4

Wall Ties & Movement Joints

Generally under normal conditions, wall ties should be embedded 50mm into the mortar on each leaf, staggered in alternate courses and spaced in accordance with the following:

Leaf Thickness mm	Cavity Width mm	Horizontal Spacing mm	Vertical Spacing mm	Ties per m ²
Less than 90mm	50 - 75	450	450	4.9
Over 90mm	50 - 150	900	450	2.5

For unreinforced masonry panels, the typical recommended spacing between vertical movement joints is as follows:

Internal Walls: 8m – 12m External Walls: 6m – 9m

Good Site Practice & Safe Handling

- Packs should be stored on firm, level ground no more than 2 packs high and protected from severe weather to preserve their quality. Care must be taken when removing the plastic bands as individual blocks may fall out. Never un-band packs above shoulder height.
- In the absence of a revised version of the HSE guidance given in their withdrawn Construction Sheet 37 'Handling Building Blocks' the following principles should be followed: There is a risk of injury in the repetitive handling of blocks heavier than 20kg. Repetitive manual handling of blocks over 20kg should be subject to a risk assessment and a safe system of work should be established before block-laying commences.
- Blocks should not be laid if the temperature is at or below 3°C and falling.
- Blocks should always be laid on a full bed of mortar and vertical joints filled.
- Do not wet the blocks before laying. Where necessary, adjust the consistency of the mortar to suit the suction of the block.

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Product details and availability may vary between manufacturing locations. Please contact your nearest regional sales office for sales, product and technical advice.

North East Region :

Tel: 01207 544 214

Fax: 01207 541 800

blocks@thomasarmstrong.co.uk

Cumbria, North Lancashire and Borders Region :

Tel: 01900 68114

Fax: 01900 66136

cumbriablocks@thomasarmstrong.co.uk

Yorkshire, Humber and Lincolnshire Region :

Tel: 0113 232 0022

Fax: 0113 287 0839

stocks.sales@thomasarmstrong.co.uk

North West, Cheshire, Saffordshire and West Midlands Region :

Tel: 0151 525 5991

Fax: 0151 530 1676

wrainford@thomasarmstrong.co.uk