



HBP DENSE BLOCKS DATASHEET

A range of fair-face, paint grade and standard dense concrete blocks, suitable for all masonry applications, including load-bearing and non-loadbearing walls and beam and block floors.

Appearance and Configuration

The blocks are manufactured from local, specially selected and prepared aggregates, giving a buff-grey finish.

Authority

The block range conforms to BS EN 771-3 and is manufactured under a Quality Management System complying with ISO 9001 and ISO 45001. The blocks meet Category I, Manufacturing Control, as specified in BS EN 1996-1-1: 2005.

| BLOCK PROPERTIES | |
|---|---|
| Dimensions (mm): | L: 440mm, H: 215mm W: 100mm, 140mm W: 190mm, 215mm |
| Dimensional tolerances: | Category: D1 Flatness: NPD Parallelism: NPD |
| Configuration: | Group 1 Solid |
| Dimensional stability: | Moisture movement ≤0.6mm/m |
| Shear bond: | 0.15N/mm ² (fixed value) |
| Flexural bond strength: | NPD |
| Characteristic compressive strength: | 7.3N/mm ² , 10.4N/mm ² and 22.5N/mm ² (⊥ bed face) |
| Net Dry Density: | 1900-2100 kg/m ³ |
| Reaction to fire: | Euroclass A1 |
| Water absorption: | NPD |
| Water Vapour Diffusion: | 5/15μ (fixed value) |
| Thermal conductivity: | P = 50% 1.14 W/(m.K) [λ10,dry] |
| Durability against freeze-thaw: | Not to be left exposed |



Technical Properties

| Properties | 100 | 140 | 190 | 215 |
|----------------------------------|-----------------------------------|------|------|------|
| Mean compressive strength | 7.3, 10.4, 22.5 N/mm ² | | | |
| Net dry density of concrete | 1900-2100 kg/m ³ | | | |
| Unit weight (kg) | 19.1 | 25.7 | 35.2 | 39.3 |
| Laid weight (kg/m ²) | 204 | 274 | 376 | 420 |
| 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 resistances for the HBP 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 HBP Blocks 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 | 48 | 50 | 51 |
| 140 | 51 | 52 | 53 |
| 190 | 54 | 55 | 56 |
| 215 | 55 | 56 | 57 |

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 saturation and freezing.

Control joints

Accommodation of movement due to material shrinkage, and ambient conditions should be assessed and considered in accordance with BS EN 1996:1-1: 2005 and PD 6697. For unreinforced walls, control joints should normally be provided at 6.0m centres.

Pack details

| Pack Size (no. of blocks) | | | |
|---------------------------|-----|-----|-----|
| 100 | 140 | 190 | 215 |
| 80 | 60 | 40 | 40 |

Sustainability and Environment

Haughley Block Plant Bury St Edmunds is the first zero-carbon block factory in the UK; all electricity to the block machine, batching plant, cuber, kilns etc is solar or wind, all ancillary machinery is electric lithium powered battery. This factory gives us licence to manufacture/deliver the most environmentally friendly blocks of every kind/type, density/weight (factory visits on request).

Haughley Block Plant Ltd is ISO 9001, ISO 14001, ISO 45001 and UKCA certified.

Special requests

Haughley Block Plant is privately-owned, this allows us to produce cost-effective, special-order blocks, quickly and efficiently. Please contact us to discuss your requirements and we will endeavour to fulfil your request in a friendly, professional and confidential manner.



Contact:

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