



## F10 Ibstock Brick Walling

**110 CLAY FACING BRICKWORK** Bricks: To BS EN 771-1.

Manufacturer and Reference: **Ibstock Brick KGB-YELLOW**

Product Name: **Yellow Glazed GE-01**

Configuration: **Vertically Perforated**

Compressive Strength

Mean Value: **125N/mm<sup>2</sup>**

Category: **Refer to Manufacturer**

- Freeze/Thaw Resistance: **F2**
- Work Sizes (length x width x height): **215x102x65** [mm]
- Tolerance category: **T2**
- Additional requirements:
- Density- Gross Dry: **1820Kg/m<sup>3</sup>**
- Thermal Conductivity: **1.12W/mk**
- Water vapour permeability: tabulated from BS EN 1745: 5/15 $\mu$
- Water absorption: **4.5%**
- Reaction to Fire: **Euroclass A1**

### • Special Shapes

Special shapes: To BS 4729 & as detailed in

Mortar Mix: As defined in PD6697 Table 15 (See 460 below)

(Attention should be given to the exposure ratings of the building in the selection of mortars and joint profile specified).

Special colour reference: as supplied by

Brickwork Bond:

Joints Profile: (See 635 below)

### • 380 Engineering bricks for non-facework

Bricks: To BS EN 771-1 as supplied by IBSTOCK BRICK LIMITED

Engineering Bricks to be Class: A or B (please specify) as described in the National Annex.

Mortar: As 460 below.

Mix:

Bond:

Joints Profile: Bucket Handle or Struck.

- Mortar: As section Z21.
- Standard: To BS EN 998-2
- Mix:
- Additional requirements:
- Bond:
- Joints:
- Features:

(Attention should be given to the exposure ratings of the building in the selection of mortars and joint profile specified).

Our Design Advisors can give assistance on the correct mortar specifications for your project, please contact your local Design Advisor on 0844 800 4576.

## EXECUTION

### Workmanship Generally

#### 401 GOOD SITE PRACTICE GUIDE.

Obtain a copy of the Brick Development Association guide Good Site Practice & Workmanship from the BDA website at <http://www.brick.org.uk/wp-content/uploads/2015/12/Good-Site-practice-Workmanship.pdf> . The guide may also be obtained from Ibstock's Design Advisory Service please call your local Design Advisor to obtain a copy. 0844 800 4576

Please read the document and understand the importance of implementing its guidance as it can save expense and produce better brickwork.

#### 411 GUIDANCE

Obtain, read and understand Ibstock's Technical Information Sheet C12 – Building Blue Facing Bricks before commencing any blue brickwork on site.

#### 420 SITE STORAGE.

Bricks shall be inspected on delivery, carefully unloaded to minimise damage and set directly onto a well-drained, puddle free level area, not in contact with soil.

All products should be immediately protected from rain and snow.

It is important not to overload floor slabs or scaffolding with bricks.

Store units in stable stacks clear of the ground and clearly identified by type, strength, grade, etc.

Protect from adverse weather and keep clean and dry.

#### 460 MORTAR GROUPS

Mix proportions: For a specified group select a mix design from the following:

Mortar designation	Prescribed mortars (traditional proportion of materials by volume) <sup>A</sup>				Mortar class that may be assumed	Suitable for use in environmental condition
	Cement <sup>B</sup> : lime : sand with or without air entrainment	Cement <sup>B</sup> : sand with or without air entrainment	Masonry cement <sup>C</sup> : sand	Masonry cement <sup>D</sup> : sand		
(i)	1 : 0 to ¼ : 3	1 : 3	Not suitable	Not suitable	M12	Severe(S)
(ii)	1 : ½ : 4 to 4½	1 : 3 to 4	1 : 2½ to 3½	1 : 3	M6	Severe(S)
(iii)	1 : 1 : 5 to 6	1 : 5 to 6	1 : 4 to 5	1 : 3½ to 4	M4	Moderate(M)
(iv)	1 : 2 : 8 to 9	1 : 7 to 8	1 : 5½ to 6½	1 : 4½	M2	Passive(P)

<sup>A</sup> When the sand portion is given as, for example, 5 to 6, the lower figure should be used with sands containing a higher proportion of fines, whilst the higher figure should be used with sands containing a lower proportion of fines

<sup>B</sup> Cements in accordance with NA.1.3 (except masonry cements), or combinations in accordance with NA.1.4

<sup>C</sup> Masonry cement in accordance with NA.1.3 (inorganic filler other than lime)

<sup>D</sup> Masonry cement in accordance with NA.1.3 (lime)

Once work has commenced do not change mix proportions unless advised.

#### 500 Laying generally

All bricks/blocks shall be laid on a full bed of mortar and all cross-joints shall be solidly filled with mortar. Do not furrow. Do not tip and tail. Build walls in stretcher half lap bond when not specified otherwise.

Plumb perpend of facework every third or fifth cross joint along a course and even out the joint widths in between.

Bricks supplied should be set out horizontally and vertically to gauge to match appearance of reference panel.

Brickwork built in a day shall not exceed 16 courses in height without prior permission of the contract administrator.

The cavity shall be kept clear of mortar and any other debris.

All damp proof courses shall be sandwiched between beds of mortar.

All facework shall be protected against damage during the course of the work.

In addition to the above, workmanship and site practice shall be in accordance with BS 8000-3 and PD 6697.

Movement joints should be incorporated in accordance with EN 1996, PD 6697 and with the recommendations contained in 'Designing for Movement' published by Ibstock Brick Limited.

## 520 Accuracy

Courses: Level and true to line.  
Faces, angles and features : Plumb  
Permissible deviations:

Dimension	Permissible
Position in plan of any point or specified fair face in relation to the nearest building grid line at the same level	+/-10
<b>Length (unless otherwise defined by adjacent construction):</b>	
Straightness in any 5 m length	+/-5
<b>Verticality:</b>	
Up to 3 m height	+/-10
Up to 7 m height	+/-14
Overall thickness of walls	+/-10
<b>Level of bed joints:</b>	
Up to 5 m for brick masonry	+/-11
Up to 5 m for block masonry	+/-13

These measurements should not be regarded as the defining acceptability of appearance.

## 535 Height of lifts in walling

General: Rack back when raising quoins and other advance work.  
Walling using cement gauged or hydraulic lime mortar:

- Lift height: 1.2 m (maximum) above any other part of work at any time.
- Daily lift height: 1.5 m (maximum) for any one leaf.

## 560 Coursing

Brickwork, to work sizes 215x102x65mm, should be set out horizontally 4 bricks to 900mm (co-ordinating size) in stretcher bond and vertically to gauge 4 courses to 300mm to match the appearance of the reference panel.  
Setting out should also ensure satisfactory junctions and joints with adjoining or built in elements and components.

## 580 Frogged or perforated bricks

Clay Bricks may be perforated, solid or frogged. Frogged bricks must be laid frog up unless stated otherwise by the specifier.  
Lay single frogged bricks with frog uppermost; lay double frogged bricks with deeper frog uppermost. In either case completely fill frogs with mortar.  
No perforation or frog is to be exposed in work. Solid bricks must be used where necessary.

## 610 Support of existing work

Joint above inserted lintel or masonry: Fully consolidated with semidry mortar to support existing structure.

## 620 Block bonding new walls to existing:

Masonry units of markedly different characteristics, e.g. fired clay bricks and concrete blocks, should not be bonded, but should be effectively separated by either a movement joint or a slip plane to avoid problems caused by differential movement.

## 635 Jointing.

Jointing shall be except all copings and cappings to parapets and free standing walls, also sills and plinth details which must have well-tooled flush or bucket handle jointing to all faces of bricks.

Joints to be tooled to the specified profile whilst the mortar is still green. (When the mortar has been raked out to achieve a recessed joint, the "new" surface of the mortar must be re-tooled to re-seal the surface.) Raked joints should not exceed 3-4mm.

## 645 Unexposed joints.

As the work proceeds, strike excess mortar off joints that will not be exposed to view in the finished work.

## 665 Pointing.

Where specified, rake out joints to a depth of 12-15mm as the work proceeds. Subsequently, remove loose debris from the joints using a dry brush, dampen the work, and neatly point to the specified profile in a continuous operation from the top of the wall downwards as the scaffolding is taken down.

## 671 Fire stopping

Avoidance of fire and smoke penetration to timber frame construction: Tight fit between cavity barriers and masonry. Leave no gaps.

## 690 Adverse weather.

Do not use frozen materials.

Do not lay bricks/blocks when the air temperature is at or below 3 degC unless mortar has a minimum temperature of 4 degC when laid and walling is protected.

Do not lay mortar on frozen surfaces.

Maintain temperature of the work above freezing until mortar has fully hardened.

Rake out and replace mortar damaged by frost.

When instructed, rebuild damaged work.

Protect newly erected walling against rain and snow by covering when precipitation occurs, and at all times when the work is not proceeding.

## **ADDITIONAL REQUIREMENTS FOR FACEWORK**

**710 THE TERM FACEWORK.**, where used in this specification applies to all brick/block walls finished fair.

**720 Advance registration.** Obtain materials registered in advance by the Employer from the supplier(s) scheduled in 110 and 380 above. Supersede the Employer's registration and take over responsibility by an order to the supplier covering price, supply and delivery to suit the progress of the work.

### **730 Samples**

Submit samples of bricks as specified in 110 above representing the range of variation in appearance and obtain approval of appearance before placing orders with suppliers.

Pay particular attention to multi coloured bricks to ensure representation of the colour range.

### **740 Reference panels**

A reference panel should be constructed in accordance with British Standard Institute PAS 70.

The contractor must request bricks for the construction of a reference panel to be supplied direct from the manufacturer. All units supplied should be incorporated into the panel to ensure true representation of colour and finish. (Take note of the manufacturers instructions to assist with the construction of a site reference panel). The reference panel to be laid in the same bond, mortar colour and jointing intended for the building and to be accepted by the contract administrator before brickwork on site commences. The reference panel should be positioned in a clean, well-lit area and be available for the duration of the contract. A viewing distance of 3 metres must be allowed. The manufacturer must be given the opportunity to view the reference panel before further work proceeds.

### **745 Sample panels**

Units used for construction of the sample panel should be randomly sampled from the batch delivered in accordance with BS EN 771-1 prior to subsequent handling on site.

Construction of the sample panels should be in accordance with PAS 70 and should be by a) Construct sample panel representing individual consignment in the same way as 740 above. Allow the mortar sufficient time to cure, usually seven days is sufficient.

Or

b) Construct a dry bonded sample panel using no mortar. This method may be used to assess consistency of supply in respect of colour and texture.

### **750 Colour mixing**

Agree with the manufacturer to ensure that the supply of facing units is of a consistent, even colour range, batch to batch and within batches. Check each delivery for consistency of appearance with previous deliveries and with approved samples or reference panels; do not use if variation is excessive and advise the supplier immediately.

The Contractor shall mix from different packs (minimum 3) and deliveries to avoid patches, horizontal banding and racking back marks in the finished work.

### **760 Appearance**

Units should be reasonably free from chips, deep or extensive cracks or lime.

Comparison should be made to the reference panel as outlined below. Cut units with a masonry saw.

Cut edges should not be exposed to view. Cutting glazed units should be avoided where possible and requires special blades.

Set out and lay units to match appearance of relevant approved reference panel(s).

Keep courses evenly spaced using gauge rods. Set out carefully to ensure satisfactory junctions and joints with adjoining or built-in elements and components.

Protect facework against damage and disfigurement during the course of the works, particularly arrises of openings and corners.

### **800 Toothed bond**

Except where a straight vertical joint is specified new and existing facework in the same plane is to be bonded together at every course to give a continuous appearance.

### **810 Fixing of brick slips**

Brick slips made by the manufacturer should be specified as special shapes in the appropriate facing brickwork clause.

Adhesive System:

Substrate:

Pointing system:

–Preparation of slips: Clean and free of loose material.

–Slips: Fully bonded

Movement joints in substrate: Do not bridge.

Pointing: Allow adhesive bedding to set. Finish in same profile as adjoining facework. Suction of slips may require reducing before applying mortar system.

### **830 Cleanliness**

Keep facework clean during construction and thereafter until Practical Completion. Turn back scaffold boards at night and during heavy rain. If, despite precautions, mortar marks are deposited on the face of masonry units, leave to dry then remove with a stiff brush.

Rubbing to remove marks or stains will not be permitted. In the event that cleaning should be required, this shall be done using a proprietary masonry cleaner in accordance with the manufacturers instructions.

The use of jet washing or power washing should be avoided.