

SPECIFICATION CLAUSES

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Forticrete Cast Stone Dressings

292 - Section I

STANDARD & BESPOKE DRESSINGS

Standard Cast Stone Dressings are available in a variety of profiles, some of which are supplied ex-stock, the remainder are made to order.

STANDARDS & CE MARKING

Standard Cast stone units with all dimensions 650mm or less, and not containing reinforcement or fixings, are manufactured and CE marked in accordance with BS EN 771-5 for the intended use in walls, columns, and partitions:

Structural Heads are CE marked in accordance with BS EN 845-2 - Lintels.

For full Declarations of Performance please see www.forticrete-ce.com.

All other units with dimensions greater than 650mm, or containing reinforcement or fixings, comply with BS 1217 Cast Stone specification are therefore not CE Marked.

- **Manufacturer:**

- Forticrete Limited

- **Product reference:** Cast Stone Dressings.

- Insert the product references next to the applicable brochure and/or drawing numbers. For bespoke units please insert detail drawing numbers. (Delete as appropriate).

Components from the Stone in Stock Brochure

Components from the Stone in stock Scottish Range Brochure.....

Components from the Cast Stone Dressings Brochure.....

Bespoke Units in accordance with the enclosed drawing numbers.....

- **Compressive strength:**

- Units to BS EN 771-5: Category I with a mean normalised compressive strength of 25N/mm² (perpendicular to the bed face).

- Units to BS1217: the minimum mean cube compressive strength 35MPa (N/mm²).

- **Freeze/Thaw Resistance:** as PD6697: Table 15.

- **Tolerances:** Tolerance Category D1 (+2-2mm for length and height) for units to BS EN 771-5.

Tolerances for all other units as laid down in BS1217.

- **Finish/Colour:** Check availability with Forticrete. (Delete as appropriate).

Stone in Stock: Bath only

Stone in Stock Scottish Range: Buff only

Cast Stone Dressings and Bespoke:

Buff

Portland

Bath

Sherwood

Glamis Red

Holyrood

Special Colour: Please provide a sample of the colour you require and we will provide you with our colour reference for our closest match

- **Special Shapes:**

- **Additional requirements:**

- **Gross Dry Density:** 2000Kg/m³ tested to BS EN 772-13

- **Thermal Conductivity:** 1.0 W/mK($\lambda_{10, dry, unit, S1}$) based on table value from BS EN 1745 p=50%

- **Dimensional Stability:** <0.4mm/m tested to BS EN 772-14

- **Water vapour permeability:** 5/15 μ based on Table A.3 BS EN 1745

- **Water absorption:** < 2g/m².s tested to BS EN 772-11

- **Reaction to Fire:** Euroclass A1 based on Commission Decision 2000/605 EC amending 96/603 EC

- **Bond Strength:** 0.15N/mm² Shear Bond Strength (tabulated from BS EN 998-2 Annex C)

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- **Mortar:** As section Z21.
- **Standard:** To BS EN 998-2
- **Mix proportions:** For a specified group select a mix design from the following: (Delete as appropriate):

Designation (iii) 1:1:5 - 6 cement: lime: sand.

Designation (ii) 1: ½ : 4 - 4 ½ cement: lime: sand for exposed masonry such as parapets.

Whilst a higher strength mortar will be needed for exposed masonry such as parapets, consideration must then be taken to provide movement joints at closer centres.

The use of lime in mortar is strongly recommended.

Refer to Forticrete for other mixes.

- **Mortar Additional requirements:** (Delete as appropriate):

None

Coloured mortar to match cast stone dressings

Coloured mortar to match existing

Specifiers choice

Coloured mortar **Manufacturer and code:**

- **Bond:** Where relevant insert, e.g. *half lap stretcher*. Otherwise, delete this item.
- **Joints:** Jointing should normally be carried out at the end of the day's work, to avoid smearing wet mortar onto the masonry.
- Refer to installation guidance- some joints will require no mortar bedding and a cord backing/flexible sealant application to allow movement.

Coloured sealant **Manufacturer and code:**

- **For dressings with 5 mm joints: Forticrete recommend a flush finish – but the contractor will need to take extreme care not to smear mortar onto masonry: Flush**

For dressings with 10mm joints: (delete as appropriate):

Bucket handle

Recessed – 3mm maximum (dependent on exposure)

Weather struck

Features:

-Please specify here any specific features:

-Cast-in items:

Section 2

EXECUTION

Workmanship generally

440 Conditioning of units.

Avoidance of suction in cast stone dressings: Do not wet unless hot weather working dictates reducing the suction.

Use of water retaining mortar admixture: Submit details.

460 Mortar groups

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Designation (ii) 1: ½ : 4 - 4 ½ cement: lime: sand for exposed masonry such as parapets.

Whilst a higher strength mortar will be needed for exposed masonry such as parapets, consideration must then be taken to provide movement joints at closer centres.

The use of lime in mortar is strongly recommended.

Refer to Forticrete for other mixes.

500 Laying generally

Follow Forticrete installation guidance for specific applications.

Mortar joints (ashlar blocks): Fill vertical joints. Lay solid blocks on a full bed.

Bond where not specified: half lap stretcher.

Vertical joints in facework: Even widths. Plumb at every fifth cross joint along course.

520 Accuracy

Courses: Level and true to line. Dressings are gauged to course with standard metric masonry units.

Faces, angles and features: Plumb

Permissible deviations:

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- Position in plan of any point in relation to the specified building reference line and/or point at the same level ± 10 mm
 - Straightness in any 5m length ± 5 mm
 - Verticality up to 3m height ± 10 mm
 - Verticality up to 7m height ± 14 mm
 - Overall thickness of walls ± 10 mm
 - Level of bed joints up to 5m (block masonry) ± 13 mm
- These measurements should not be regarded as the defining acceptability of appearance.

535 Height of lifts in walling using cement gauged or hydraulic lime mortar

General: Rack back when raising quoins and other advance work.

- 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.

545 Levelling of separate leaves using cement gauged or hydraulic lime mortar

Locations for equal levelling of cavity wall leaves: As follows:

- Every course containing vertical twist type ties or other rigid ties.
- Every third tie course for double triangle/ butterfly ties.
- Courses in which lintels are to be bedded.

595 Lintels

Bearing: Ensure full length masonry units occur immediately under lintel ends.

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.

Block to block bonding should be every other course through the full thickness of the wall for a minimum of 100mm. All block to block joints should be fully filled with mortar.

Follow guidance in Forticrete Installation Guides.

635 Jointing

Profile: Consistent in appearance. Follow guidance on installation guide and use flexible sealant where recommended.

671 Fire stopping

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

690 Adverse weather

General: Do not use frozen materials or lay on frozen surfaces.

- Air temperature requirements: Do not lay cast stone dressings:
 - In cement gauged mortars when at or below 3°C and falling or unless it is at least 1°C and rising.
 - In hydraulic lime: sand mortars when at or below 5°C and falling or below 3°C and rising.
- Temperature of walling during curing: Above freezing until hardened.
- Newly erected walling: Protect at all times from:
 - o Rain and snow.
 - o Drying out too rapidly in hot conditions and in drying winds.

740 Finished masonry reference panel

Construct a reference panel on site to determine the general standard of the product and its application, including workmanship and mortar joint type. The panel should be approved by all parties as being the reference panel against which all quality assessments need to be based for the duration of the contract. The masonry standards require comparisons to be carried out before the units are used, in normal daylight conditions and at a distance of 3 metres.

Protect panel from weather, dust, dirt and damage.

Additional requirements for facework

750 Colour consistency of Cast Stone Dressings:

• **Conformity:** Check each delivery for consistency of appearance with previous deliveries and with approved reference panels; do not use if variation is excessive.

760 Appearance:

- **Unit selection:** Do not use units which are cracked, broken or excessively at variance with the reference panel.
- **Cutting of Cast Stone Dressings:** Whilst some Cast Stone units can be cut on site to suit (e.g. copings), other Cast Stone Dressings (e.g. window surrounds) are not intended to be cut.
If it is necessary to cut cast stone units then they should be cut on a clipper bench station with a diamond tip blade and fresh supply of clean water. The cutting slurry produced is unavoidable and needs to be washed away immediately after cutting. The chemical reaction caused by cutting reactivates cement which hardens on the first material it makes contact with after cutting. This is accentuated by heat generated in the cutting process. Dry cutting is not recommended because of this reaction. Cut faces are not to be exposed in work.

NB: Structural Heads must not be cut under any circumstances.

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- **Quality control:** Lay units to match relevant reference panels.
- **Setting out:** To produce satisfactory junctions and joints with built-in elements and components.
- **Coursing:** Evenly spaced using gauge rods.
- **Lifts:** Complete in one operation.
- **Methods of protecting facework:** Submit proposals.

780 Ground Level

Commencement of facework: Not less than 150mm below the finished level of adjoining ground or external works level.

790 Putlog scaffolding:

Not permitted in facework.

830 Cleanliness:

- **Facework:** Keep clean.
- **Mortar on facework:** Mortar which does encroach on the face of masonry should be cleaned off as work proceeds. It should not be allowed to set.
- **Removal of marks and stains:** Rubbing not permitted. Refer to Forticrete for cleaning advice.