PRODUCT DATA (SEMI DRY & WET CAST) - TECHNICAL SHEET T06

for futher information and other technical sheets please contact us on 01535 662 743

CHATSWORTH STONE MASONRY LTD

CAST STONE PRODUCTS MANUFACTURED TO BS1217. CAT WEATHERING CLASS

Composition

Our architectural masonry is manufactured in accordance with BS1217:2008 homogenous mix. We use naturally occurring aggregates, sand, Portland cement and integral water proofer. Pigments are added where necessary.

Definition
Any material manufactured with aggregates and a cementitous binder, intended to resemble in appearance and be used in a similar way to natural stone

Constituents
All products used are manufactured to the following current British standards:
BS12:1996 - Specification for Portland Cement. BS882:1992. - Aggregates BS1014:1975 - Water proofer pigments

Applications
Faced stone blocks and dressings are primarily used for external applications where required.

Compressive strength
When tested in accordance with BS EN 12390-3:2009 and BS1217:2008 three 100mm cubes giving an average crushing strength in excess of 35N/m sq for semi dry and in excess of 50N/m sq for wet cast.

Density
The typical mean density of our architectural masonry is 2220kgs/ m3 for Semi-dry and 2400/m≥ for Wet Cast

CAT (Capillary Absorption Test)
When tested in accordance with BS1217:2008 the average result over three samples was less than 1.0 mg/mm≤
The thermal conductivity of our architectural masonry in accordance with table A3:1 of the CIBS guide "thermal properties of building structures" is to be taken as follows
Exposed. .40 W/M∞C (at 5 % moisture content)
Protected.1.28 W/M∞C (at 3 % moisture content)

Manufacturing tolerances
Our architectural masonry complies with the following tolerances unless otherwise agreed in writing by us:

Plane
The maximum permitted variation from plane is 0.03% of the maximum dimension of the item or 3mm whichever is the greater

Length

The actual dimensions of individual regular units should conform to the stated dimensions subject to the tolerances below:

Tolerance in MM	length	width	thickness
Up to 600mm	+/-2	+/-2	+/-2
Over 600mm to 1000mm	+/-3	+/-3	+/-3
Over 1000mm to 2500mm	+/-4	+/-4	+/-4
Over 2500mm to 4000mm	+/-5	+/-5	+/-5
Over 4000mm	+/-6	+/-6	+/-6

Fire resistance
Units manufactured in accordance with the standard are non flammable, non-combustible and do not give off toxic gases and can provide a barrier to the spread of smoke and flames.

Structural use
Semi Dry/ lightweight heads are decorative. We can manufacture structural units in Wet Cast. Calculations and reinforcement specifications must be confirmed by your structural engineer in consultation with us.

Quoins, plinths and string courses can be used in load bearing situations when used in compression. All units are reinforced, except where stated otherwise:
6mm dia mild steel bars for handling purposes only.
Galvanized or stainless steel is available subject to additional costs.

Weathering
Many factors influence the way cast stone weathers e.g. design, exposure, climate and surrounding. All pigments used are colourfast and durable and conform to BS1014. Architectural dressings will weather in a similar manner to natural stone, when exposed to similar conditions.

Cement efflorescence
As with all reconstituted stone and cement based products there is the possibility that the temporary phenomenon known as efflorescence will occur causing lightening of colour. This will reduce over a period of time with natural weathering.

Resistance to rain penetration
As with all facing masonry (reconstructed stone walling blocks or natural stone etc) external skins of cavity walls are not totally impervious to heavy driving rain as there is the possibility that water penetration will take place though the mortar joints. To avoid this, normal good building practice should be observed.

Surface finish
The colour and texture of the exposed face of the cast stone should be agreed between the client and ourselves. With the differences in the way the units are manufactured there can be subtle variations in the colour and texture. Cement and aggregates used are carefully chosen for their quality and consistency. All are obtained from natural sources and are therefore subject to variations beyond our control. We always make every effort to ensure consistency in colour and texture of units manufactured, but no guarantees can be given.

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Chatsworth Stone Masonry Ltd, Eastwood Works, Parson Street, Keighley, BD21 3HD
T 01535 662 743 F 01535 664 907