

## Perforated Engineering Brick

Date Created: 19/05/21



**Engineering Bricks** are durable, high strength bricks, specially manufactured to accommodate high loads and cope with exposure to aggressive ground conditions.

Made from selected dense aggregates and a choice of cements, the bricks, which exhibit low porosity and high dimensional accuracy, are completely frost resistant and suitable for use below ground where natural sulphates, up to and exceeding Class 3 levels\*, are present.

(\*see durability information on datasheet.)

**Engineering Bricks** are manufactured and tested in accordance with BS EN 771-3: 2011; Specification for Masonry Units: Aggregate Concrete Masonry Units and meet the criteria for strength, durability and sulphate resistance as detailed in BS 5628 Pt 3: 2005 and PD 6697 and other Standards.

Marshall's Engineering bricks comply and exceed the NHBC, Water Authorities, and Transport & Highways Agencies standards and specifications.

- Functional use when requirement for strength & low water porosity.
- Used above & below dpc.
- Used as detailing plinth brick.
- Out of ground facing brick replacement.

### DESCRIPTION

CE Marking/DOP	<a href="http://www.marshalls.co.uk/DOP">www.marshalls.co.uk/DOP</a>
NBS Specification	F10/215, F10/385

# Perforated Engineering Brick

Date Created: 19/05/21

## PHYSICAL PROPERTIES

Work Dimensions (mm)	215x100x65
Nominal Dimensions (mm)	215x100x65
Durability (Freeze-thaw)	Engineering Concrete bricks are high strength, low absorption bricks which comply in all respects to the standards required by BS 5628: 2005, the NHBC, the Highways Agency, the Water Research Council and the Department of Transport. They are suitable for use in sulphate soil conditions up to and including DS-1, DS-2 and DS-3. The perforated engineering may be suitable up to DS-4 conditions subject to satisfying the other criteria laid down in the relevant BRE Special Digest. The Engineering Bricks are not suitable for use as an actual damp proof course. Neither the Engineering Brick, nor the mortar, is resistant where high levels of acid are present and degradation will occur to varying degrees dependant on the pH levels as shown below: *pH 6.5-5.5 - slight degradation *pH 5.5-4.5 - severe degradation *pH < 4.5 - very severe degradation
Thermal Conductivity (K value)	Protected: 1.24 W/mK Exposed: 1.33 W/mK
Compressive Strength (MPa)	Perforated Engineering Brick >50N/mm <sup>2</sup> mean air dry
Water Vapour Permeability	5/15μ (Tabulated from EN 1745)
Shear Bond Strength	Engineering characteristic 0.23N/mm <sup>2</sup> (Tabulated from EN 998-2: 2003, Annex C)
Dimensional Stability	<0.6mm/m

## SPECIFICATION

Selection Of Mortar	It is recommended that the guidelines provided in BS EN 1996 - Design of Masonry Structures & BTB 4 is taken into account before a final choice is made
Emission of Asbestos	No content
Reaction to fire	Euroclass A1
Dangerous Substances	No performance declared
Movement Joints	Spacing and width should be based on the guidelines provided in BS EN 1996 - Design of Masonry Structures
Moisture Movement	<0.45mm/m

## SITE WORKS

Installation	Refer to BTB 1
--------------	----------------

## SUPPLY

Packaging	Self contained packs, shrinkwrapped to non-returnable pallets
-----------	---

## FURTHER INFORMATION

Cleaning & Maintenance	Cleaning & maintenance details are available on request
Efflorescence	Any product containing cement during its early life may exhibit a temporary white discolouration known as efflorescence. This is not a product fault and will gradually disappear with exposure to natural weathering and trafficking. Our manufacturing process involve the incorporation of advanced additives both within and on the surface of the brick. The amount of efflorescence emanating from the bricks can thus be classed as minimal
Weathering	It should be appreciated that with all products weathering and site conditions can cause shade variation to appear across the surface of individual units. This does not in any way affect the performance of the units and any such variation will diminish over a period of time as the product matures
Product Evolution	The evolution of new product design is continuous and information is subject to change without notice. Customers should check with the supplier to ensure that they have the latest details Product Evolution Marshalls Edenhall reserve the right to amend the technical information as deemed necessary and in accordance with the relevant national and international standards without notice

## Contact Us