BRITISH STANDARD

BS EN
772-7:1998

Methods of test for masonry units —

Part 7: Determination of water absorption of clay masonry damp proof course units by boiling in water

The European Standard EN 772-7:1998 has the status of a British Standard

ICS 91.100.20

National foreword

This British Standard is the English language version of EN 772-7:1998. It is included in a package of standards declared by CEN/TC 125 and is intended that it will partially supersede BS 3921:1985 *Specification for clay bricks* which will be withdrawn on 30 September 2000 if all the European Standards included in the package are available.

The UK participation in its preparation was entrusted by Technical Committee B/519, Masonry and associated testing, to Subcommittee B/519/1, Masonry units, which has the responsibility to:

— aid enquirers to understand the text;

— present to the responsible European committee any enquiries on the interpretation, or proposals for change, and keep the UK interests informed;

— monitor related international and European developments and promulgate them in the UK.

A list of organizations represented on this subcommittee can be obtained on request to its secretary.

Cross-references

The British Standards which implement international or European publications referred to in this document may be found in the BSI Standards Catalogue under the section entitled "International Standards Correspondence Index", or by using the "Find" facility of the BSI Standards Electronic Catalogue.

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Summary of pages

This document comprises a front cover, an inside front cover, the EN title page, pages 2 to 3 and a back cover.

This British Standard, having been prepared under the direction of the Sector Committee for Building and Civil Engineering, was published under the authority of the Standards Committee and comes into effect on 15 December 1998

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English version

Methods of test for masonry units — Part 7: Determination of water absorption of clay masonry damp proof course units by boiling in water

Méthodes d'essai des éléments de maçonnerie — Partie 7: Détermination de l'absorption d'eau à l'eau bouillante des éléments de maçonnerie en terre cuite servant de coupure de capillarité

Prüfverfahren für Mauersteine — Teil 7: Bestimmung der Wasseraufnahme von Mauerziegeln für Feuchteisolierschichten durch Lagerung in siedendem Wasser

This European Standard was approved by CEN on 2 July 1998.

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CEN

European Committee for Standardization
Comité Européen de Normalisation
Europäisches Komitee für Normung

Central Secretariat: rue de Stassart 36, B-1050 Brussels

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Foreword

This European Standard has been prepared by Technical Committee CEN/TC 125, Masonry, the Secretariat of which is held by BSI.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by February 1999, and conflicting national standards shall be withdrawn at the latest by September 2000.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

Contents

1 Scope

This European Standard specifies a method for determining the water absorption of damp proof course clay masonry units by boiling the specimens in water for a fixed period.

2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references subsequent amendments to or revisions of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

prEN 771-1, *Specification for masonry units — Part 1: Clay masonry units.*

3 Principle

The specimens, after drying to constant mass, are weighed and, subsequently immersed in water which is boiled for 5 h, wiped and weighed. The ratio of increase in mass of the saturated specimens to the dry mass is calculated.

4 Symbols

W_s is the water absorption of the specimen (%).

m_d is the mass of the dry specimen (g).

m_s is the mass of the saturated specimen (g).

5 Apparatus

5.1 *Ventilated oven*, capable of maintaining a temperature of 105 °C ± 5 °C.

5.2 *Weighing instrument*, capable of weighing the masonry units to an accuracy of 1 g.

5.3 *Water tank*, with adequate capacity to submerge the whole specimen and provided with a grid so that free circulation of water around all surfaces of the specimen can be achieved.

6 Preparation of specimens

6.1 Sampling

The method of sampling shall be in accordance with prEN 771-1. The minimum number of specimens shall be six, but a larger minimum number may be specified in the product specification, in which case that larger number shall be used.

6.2 Drying of specimens

The test specimens shall be dried to constant mass in a ventilated oven (**5.1**) at a temperature of 105 °C ± 5 °C. Constant mass is reached if, during the drying process, in two consecutive weighings 24 h apart, the loss in mass between the two determinations is not more than 0,2 % of the total mass.

7 Test procedure

Weigh the specimen after drying (m_d).

Place the specimen into a tank of water (**5.3**) immediately after weighing ensuring that water can circulate freely on all sides.

Heat the water to boiling point in approximately 1 h, boil continuously for 5 h, and then allow to cool to room temperature by natural loss of heat for not less than 16 h. Remove the specimen, wipe off the surface water with a damp cloth, and weigh within 2 min after its removal from the water (m_s) When wiping perforated units, water that might otherwise be left in the perforations shall be removed by shaking.

8 Calculation and expression of results

Report the water absorption (w_s) of each specimen as the ratio of the increase in mass of the saturated specimen to the mass of the dry specimen. Calculate this to the nearest 0,1 % using the following equation:

$$W_s = \frac{m_s - m_d}{m_d} \times 100\,\%$$

9 Evaluation of results

Calculate the mean value of the water absorption of the specimens to the nearest 0,1 %.

10 Test report

The test report shall contain the following information:

a) the number, title and date of issue of this European Standard;

b) the name of the organization that carried out the sampling and the method used;

c) the date of testing;

d) the type, origin and designation of the masonry unit by reference to prEN 771-1;

e) the number of specimens in the sample;

f) the mass of each specimen dry and saturated;

g) the individual and mean water absorption values to the nearest 0,1 %;

h) remarks, if any.

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