

Precast concrete products — Test method for glass-fibre reinforced cement

Part 1. Measuring the consistency of the matrix — ‘Slump test’ method

The European Standard EN 1170-1 : 1997 has the status of a
British Standard

ICS 91.100.30

National foreword

This British Standard is the English language version of EN 1170-1 : 1997.

The UK participation in its preparation was entrusted to Technical Committee B/524, Precast concrete products, 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.

The UK voted against this standard at the CEN Formal Vote stage but the analysis of voting, in accordance with CEN/CENELEC Internal Regulations Part 2 : *Common rules for standards work*, resulted in a positive vote. In consequence, the document was accepted as a European Standard.

This standard, together with BS EN 1170 : Parts 2 to 7, supersedes BS 6432 : 1984 which is withdrawn.

A list of organizations represented on this committee 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 and 3 and a back cover.

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English version

Precast concrete products — Test method for glass-fibre reinforced cement — Part 1: Measuring the consistency of the matrix — ‘Slump test’ method

Produits préfabriqués en béton — Méthode d’essai des composites ciment-verre — Partie 1: Mesure de la consistance de la matrice — Méthode dite ‘par étalement’

Vorgefertigte Betonerzeugnisse — Prüfverfahren für Glasfaserbeton — Teil 1: Bestimmung der Konsistenz der Matrix-Setzversuch

This European Standard was approved by CEN on 29 October 1997.

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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

Foreword

This European Standard has been prepared by Technical Committee CEN/TC 229, Precast concrete products, the secretariat of which is held by AFNOR.

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 May 1998, and conflicting national standards shall be withdrawn at the latest by May 1998.

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.

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1 Scope

This European Standard specifies a method of test making it possible to check the workability of the mixture and the conformity of the water-cement ratio (suitability for pumping and compaction) in glass-fibre reinforced cement.

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 any 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.

EN 1170-2 *Precast concrete products — Test method for glass-fibre reinforced cement — Part 2: Measuring the fibre content in fresh GRC — 'Wash out test' method*

3 Definition and abbreviation

3.1 Definition

For the purposes of this standard the following definition applies:

matrix

Composition of the glass-fibre reinforced cement without the fibres. It is made up of the mixture of sand, cement, water and any admixtures and additives.

3.2 Abbreviation

GRC Glass-fibre reinforced cement.

4 Apparatus

The apparatus comprises:

- a *plastic or metallic tube*, with a smooth internal surface, $(55 \pm 0,5)$ mm high with an internal diameter of $(57 \pm 0,5)$ mm and an external diameter of not less than 65 mm;
- a *flat plate*, of smooth, easily-cleaned material approximately (300×300) mm on which are engraved, with a tolerance of $\pm 0,5$ mm, nine numbered concentric circles, the diameters of which are given in table 1;
- a *trowel*.

5 Procedure

Put the plate on a horizontal support.

Wipe the plate and the inside of the tube with a damp cloth.

Put the tube on the plate, centering it in the engraved circle no. 0.

Take about 200 cm³ of the matrix ready to be used (for example from the pump hopper in case of spray).

Fill the tube with matrix, wait a few seconds for the air bubbles to escape, and level the surface with the trowel.

Lift the tube slowly and vertically. The matrix will spread out onto the plate.

Wait approximately 30 s and read the number of the circle reached by the spreading matrix. If necessary, round the result to the nearest circle.

Record the result in the test record book (an example of a record sheet is given in EN 1170-2).

Clean and dry the apparatus.

6 Interpreting the result

The optimum value is determined according to the method of manufacture and type of product to be produced. It is defined during the establishment of the mix design.

If the result obtained does not comply with the optimum value defined, carry out a second test to validate the result before modifying the composition (e.g. change the water quantity).

Table 1. Diameters and numbering of the circles

Number of circle	0	1	2	3	4	5	6	7	8
Diameter of circle mm	65	85	105	125	145	165	185	205	225

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