BS EN 13892-3:2014

BSI Standards Publication

Methods of test for screed materials

Part 3: Determination of wear resistance — Böhme

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National foreword

This British Standard is the UK implementation of EN 13892-3:2014. It supersedes BS EN 13892-3:2004 which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee CB/300, Screeds and in-situ floorings.

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

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

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Prüfverfahren für Estrichmörtel und Estrichmassen - Teil 3: Bestimmung des Verschleißwiderstandes nach Böhme

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

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Contents

Page

Foreword

This document (EN 13892-3:2014) has been prepared by Technical Committee CEN/TC 303 “Floor screeds and screed materials”, the secretariat of which is held by UNI.

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of an identical text or by endorsement, at the latest by June 2015 and conflicting national standards shall be withdrawn at the latest by June 2015.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN 13892-3:2004.

In comparison with the previous edition, changes have been made in:

— Clause 6, 2nd paragraph and Table 2;

— Clause 7, 2nd paragraph.

EN 13892, *Methods of test for screed materials*, is divided in the following parts:

— *Part 1: Sampling, making and curing specimens for test*;

— *Part 2: Determination of flexural and compressive strength*;

— *Part 3: Determination of wear resistance – Böhme* [the present document];

— *Part 4: Determination of wear resistance-BCA*;

— *Part 5: Determination of wear resistance to rolling wheel of screed material for wearing layer*;

— *Part 6: Determination of surface hardness*;

— *Part 7: Determination of wear resistance to rolling wheel of screed material with floor coverings*;

— *Part 8: Determination of bond strength*.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

1 Scope

This European Standard specifies a method for determining the wear resistance of moulded specimens made from cementitious screed material, primarily for hard aggregate wearing screed materials or optionally for other screed materials. The method is also suitable for specimens cut from floor screed. This method is unsuitable for synthetic resin screed materials.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 459-2, *Building lime - Part 2: Test methods*

EN 13813, *Screed material and floor screeds - Screed material - Properties and requirements*

EN 13892-1, *Methods of test for screed materials - Part 1: Sampling, making and curing specimens for test*

ISO 565, *Test sieves - Metal wire cloth, perforated metal plate and electroformed sheet - Nominal sizes of openings*

3 Principle

Cast specimens are placed on the Böhme abrader, on the test track of which standard abrasive is strewn, the disk then being rotated and the specimens subjected to an abrasive load of 294 N for a given number of cycles.

4 Symbols and abbreviations

$A = \Delta V$ is the wear resistance-Böhme in cm^3 per 50 cm^2 and the loss in volume after 16 cycles

$\Delta l = l_0 - l_{16m}$ is the mean reduction in mm after 16 cycles

l_0 is the mean thickness of the specimen in mm from the measurements made at all nine measuring points prior to testing

l_{16m} is the mean thickness of the specimen in mm from the measurements made at all nine measuring points after completion of the test

Δm is the reduction in mass in g after 16 cycles

ρ_R is the density of the specimen in g/cm^3 or, in the case of multi-layer specimens, the density of the wearing layer

5 Apparatus

The Böhme abrader as shown in Figure 1 consists of a rotating table with a defined test track to receive the abrasive, a specimen holder and a loading device.

The rotating table shall have a diameter of approximately 750 mm and be flat and positioned horizontally. When loaded, its speed shall be (30 ± 1) r/min.