

## **Kahlid. Osa 6: Glasuurimata plaatide süva-hõõrdkulumiskindluse määramine**

Ceramic tiles - Part 6: Determination of resistance to  
deep abrasion for unglazed tiles

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN ISO 10545-6:2000 sisaldab Euroopa standardi EN ISO 10545-6:1997 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 20.03.2000 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN ISO 10545-6:2000 consists of the English text of the European standard EN ISO 10545-6:1997.</p> <p>This document is endorsed on 20.03.2000 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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<p><b>Käsitlusala:</b></p> <p>See standardi EN ISO 10545 osa määrab kindlaks katsemeetodi kõigi põrandakatteks kasutatavate glasuurimata kahlite süva- hõõrdkulumiskindluse määramiseks.</p>	<p><b>Scope:</b></p>
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**ICS** 91.100.23

**Võtmesõnad:** hõõrdkulumiskatsed, hõõrdkulumiskindlus, katsed, keraamika, määramine, plaadid, põrandakatted

Descriptors: Ceramics, tiles, deep abrasion, testing.

**English version**

**Ceramic tiles**

**Part 6: Determination of resistance to deep abrasion  
for unglazed tiles  
(ISO 10545-6 : 1995)**

Carreaux et dalles céramiques –  
Partie 6: Détermination de la résis-  
tance à l'abrasion profonde pour les  
carreaux non émaillés  
(ISO 10545-6 : 1995)

Keramische Fliesen und Platten –  
Teil 6: Bestimmung des Wider-  
standes gegen Tiefenverschleiß –  
Unglasierte Fliesen und Platten  
(ISO 10545-6 : 1995)

This European Standard was approved by CEN on 1997-05-01.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

The European Standards exist in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, the Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and the United Kingdom.

**CEN**

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

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

## Foreword

International Standard

ISO 10545-6 : 1995 Ceramic tiles – Part 6: Determination of resistance to deep abrasion for unglazed tiles, which was prepared by ISO/TC 189 'Ceramic tiles' of the International Organization for Standardization, has been adopted by Technical Committee CEN/TC 67 'Ceramic tiles', the Secretariat of which is held by UNI, as a European Standard.

EN ISO 10545 comprises the following parts, under the common title 'Ceramic tiles':

- Part 1: Sampling and basis for acceptance
- Part 2: Determination of dimensions and surface quality
- Part 3: Determination of water absorption, apparent porosity, apparent relative density and bulk density
- Part 4: Determination of modulus of rupture and breaking strength
- Part 5: Determination of impact resistance by measurement of coefficient of restitution
- Part 6: Determination of resistance to deep abrasion for unglazed tiles
- Part 7: Determination of resistance to surface abrasion for glazed tiles
- Part 8: Determination of linear thermal expansion
- Part 9: Determination of resistance to thermal shock
- Part 10: Determination of moisture expansion
- Part 11: Determination of crazing resistance for glazed tiles
- Part 12: Determination of frost resistance
- Part 13: Determination of chemical resistance
- Part 14: Determination of resistance to stains
- Part 15: Determination of lead and cadmium given off by glazed tiles
- Part 16: Determination of small colour differences
- Part 17: Determination of coefficient of friction

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, and conflicting national standards withdrawn, by January 1998 at the latest.

In accordance with the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard:

Austria, Belgium, the Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and the United Kingdom.

## Endorsement notice

The text of the International Standard ISO 10545-6 : 1995 was approved by CEN as a European Standard without any modification.

## 1 Scope

This part of ISO 10545 specifies a test method for determining the resistance to deep abrasion of all unglazed ceramic tiles used for floor coverings.

## 2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this part of ISO 10545. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this part of ISO 10545 are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 630-1:—<sup>1)</sup>, *Structural steels — Part 1: Plates, wide flats, bars, sections and profiles*.

ISO 8486-1:—<sup>2)</sup>, *Bonded abrasives — Grain size analysis — Designation and determination of grain size distribution — Part 1: Macrogrits F 4 to F 220*.

## 3 Principle

Determination of the abrasion resistance of unglazed tiles by measuring the length of the groove produced in the proper surface by means of a rotating disc, under given conditions and with the use of abrasive material.

1) To be published. (Revision of ISO 630:1980)

2) To be published. (Revision of ISO 8486:1986)

## 4 Apparatus

**4.1 Abrasion apparatus**, (see figure 1), consisting essentially of a rotating disc, a storage hopper with a dispensing device for the abrasive material, a test specimen support and a counterweight.

The disc is made of E 235 A (Fe 360 A) (ISO 630-1) with a diameter of  $(200 \pm 0,2)$  mm and thickness at the edge of  $(10 \pm 0,1)$  mm, and with a revolution rate of 75 r/min.

The pressure with which the test specimens are held against the steel disc is determined by calibrating the apparatus against transparent fused silica. The pressure is adjusted such that, after 150 r using F 80 (ISO 8486-1) abrasive, a chord of  $(24 \pm 0,5)$  mm is produced. Transparent fused silica shall be used as a primary standard. A secondary standard of float glass or other products may be used.

When the diameter has worn by 0,5 % of the initial diameter, the steel disc shall be replaced.

**4.2 Measuring gauge**, accurate to 0,1 mm.

**4.3 Abrasive material**: white fused aluminium oxide of grain size F 80, according to ISO 8486-1.

## 5 Test specimens

### 5.1 Types of test specimens

Tests shall be carried out using whole tiles or test specimens of suitable dimensions. Before testing, small specimens shall be fixed with an adhesive onto a larger background, avoiding joints.