

Vitreous and porcelain enamels - Determination of the resistance to abrasion - Part 1: Abrasion testing apparatus (ISO 6370-1:1991)

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN ISO 6370-1:2021 sisaldab Euroopa standardi EN ISO 6370-1:2021 ingliskeelset teksti.	This Estonian standard EVS-EN ISO 6370-1:2021 consists of the English text of the European standard EN ISO 6370-1:2021.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation and Accreditation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 06.10.2021.	Date of Availability of the European standard is 06.10.2021.
Standard on kättesaadav Eesti Standardimis- ja Akrediteerimiskeskusest.	The standard is available from the Estonian Centre for Standardisation and Accreditation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

ICS 75.200

Standardite reprodutseerimise ja levitamise õigus kuulub Eesti Standardimis- ja Akrediteerimiskeskusele

Andmete paljundamine, taastekitamine, kopeerimine, salvestamine elektroonsesse süsteemi või edastamine ükskõik millises vormis või millisel teel ilma Eesti Standardimis- ja Akrediteerimiskeskuse kirjaliku loata on keelatud.

Kui Teil on küsimusi standardite autoriõiguse kaitse kohta, võtke palun ühendust Eesti Standardimis- ja Akrediteerimiskeskusega: Koduleht www.evs.ee; telefon 605 5050; e-post info@evs.ee

The right to reproduce and distribute standards belongs to the Estonian Centre for Standardisation and Accreditation

No part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying, without a written permission from the Estonian Centre for Standardisation and Accreditation.

If you have any questions about standards copyright protection, please contact the Estonian Centre for Standardisation and Accreditation: Homepage www.evs.ee; phone +372 605 5050; e-mail info@evs.ee

English Version

**Vitreous and porcelain enamels - Determination of the
resistance to abrasion - Part 1: Abrasion testing apparatus
(ISO 6370-1:1991)**

Émaux vitrifiés - Détermination de la résistance à
l'abrasion - Partie 1: Appareillage d'essai d'abrasion
(ISO 6370-1:1991)

Emails und Emailierungen - Bestimmung des
Widerstandes gegen Verschleiß - Teil 1:
Verschleißprüfgerät (ISO 6370-1:1991)

This European Standard was approved by CEN on 20 September 2021.

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 CEN-CENELEC Management Centre or to any CEN member.

This European Standard exists 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 CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

European foreword

The text of ISO 6370-1:1991 has been prepared by Technical Committee ISO/TC 107 "Metallic and other inorganic coatings" of the International Organization for Standardization (ISO) and has been taken over as EN ISO 6370-1:2021 by Technical Committee CEN/TC 262 "Metallic and other inorganic coatings, including for corrosion protection and corrosion testing of metals and alloys" 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 April 2022, and conflicting national standards shall be withdrawn at the latest by April 2022.

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

Any feedback and questions on this document should be directed to the users' national standards body. A complete listing of these bodies can be found on the CEN website.

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, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Endorsement notice

The text of ISO 6370-1:1991 has been approved by CEN as EN ISO 6370-1:2021 without any modification.

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

International Standard ISO 6370-1 was prepared by Technical Committee ISO/TC 107, *Metallic and other inorganic coatings*, Sub-Committee SC 6, *Vitreous and porcelain enamels*.

ISO 6370 consists of the following parts, under the general title *Vitreous and porcelain enamels — Determination of the resistance to abrasion*:

- *Part 1: Abrasion testing apparatus*
- *Part 2: Loss in mass after sub-surface abrasion*

© ISO 1991

All rights reserved. No part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from the publisher.

International Organization for Standardization
Case Postale 56 • CH-1211 Genève 20 • Switzerland

Printed in Switzerland

Vitreous and porcelain enamels — Determination of the resistance to abrasion —

Part 1: Abrasion testing apparatus

1 Scope

This part of ISO 6370 specifies the requirements for the testing apparatus to be used for the determination of the resistance to abrasion of vitreous and porcelain enamel coatings.

2 General description

The abrasion testing apparatus is composed essentially of the parts described in 3.1 to 3.4.

Figure 1 shows the arrangement of the specimens and reference glass plates in the apparatus.

3 Requirements

3.1 Oscillating table with drive

An oscillating table of about 10 mm in thickness, made of steel or light metal, is placed horizontally on an eccentric drive in such a way that during the test every point of the oscillating table describes a horizontal circle of $22 \text{ mm} \pm 1 \text{ mm}$ in diameter. The oscillating table shall be large enough for testing at least three specimens and clamping three reference plates on it by means of the retaining rings (3.2).

The eccentric drive shall operate at a rotational frequency of $300 \text{ min}^{-1} \pm 3 \text{ min}^{-1}$ and be provided with a device for checking this frequency.

3.2 Retaining rings

At least six retaining rings as shown in figure 2 are required for the testing apparatus. The retaining ring shall be constructed of steel, cast iron or light metal lined with rubber. The opening is used for introducing the abrading charge and shall be able to be closed by a rubber stopper.

3.3 Sealing rings

At least six sealing rings of $87 \text{ mm} \pm 0,5 \text{ mm}$ internal diameter, $10 \text{ mm} \pm 2 \text{ mm}$ breadth and $2 \text{ mm} \pm 0,5 \text{ mm}$ thickness, consisting of a non-rigid elastic material (e.g. rubber), are required on the testing apparatus.

3.4 Clamping devices

The clamping device shall press the lower edge of the retaining ring (3.2) against the sealing ring (3.3) which retains the specimen or the reference glass plate on the oscillating table (see 3.1). It shall be possible to loosen the clamping devices quickly for easy exchange of specimens and reference glass plates.