BS EN ISO 8289-2:2019

BSI Standards Publication

Vitreous and porcelain enamels – Low-voltage test for detecting and locating defects

Part 2: Slurry test for profiled surfaces (ISO 8289-2:2019)

bsi.

National foreword

This British Standard is the UK implementation of EN ISO 8289-2:2019.

The UK participation in its preparation was entrusted to Technical Committee STI/36, Vitreous enamel coatings.

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.

Published by BSI Standards Limited 2019

ISBN 978 0 580 99356 5

ICS 25.220.50

Compliance with a British Standard cannot confer immunity from legal obligations.

This British Standard was published under the authority of the Standards Policy and Strategy Committee on 31 May 2019.

Amendments/corrigenda issued since publication

Date	Text affected

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN ISO 8289-2

April 2019

ICS 25.220.50

English Version

Vitreous and porcelain enamels - Low-voltage test for detecting and locating defects - Part 2: Slurry test for profiled surfaces (ISO 8289-2:2019)

Émaux vitrifiés - Essai à basse tension pour la détection et la localisation des défauts - Partie 2: Essai à la barbotine pour surfaces profilées (ISO 8289-2:2019)

Emaills und Emaillierungen - Niedrigspannungsprüfung zum Nachweis und Lokalisieren von Fehlstellen - Teil 2: Schlickermethode für profilierte Oberflächen (ISO 8289-2:2019)

This European Standard was approved by CEN on 21 March 2019.

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

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

Ref. No. EN ISO 8289-2:2019: E

European foreword

This document (EN ISO 8289-2:2019) has been prepared by Technical Committee ISO/TC 107 "Metallic and other inorganic coatings" in collaboration with 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of an identical text or by endorsement, at the latest by October 2019, and conflicting national standards shall be withdrawn at the latest by October 2019.

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.

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, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Endorsement notice

The text of ISO 8289-2:2019 has been approved by CEN as EN ISO 8289-2:2019 without any modification.

Contents

Page

Foreword ..... **iv**
1 Scope **1**
2 Normative references **1**
3 Terms and definitions **1**
4 Principle **1**
5 Test medium **1**
5.1 General 1
5.2 Formulation 2
6 Apparatus **2**
6.1 Power source 2
6.2 Test electrode 2
7 Test specimens **2**
8 Procedure **3**
9 Evaluation **3**
10 Test report **3**
Bibliography **4**

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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 107, *Metallic and other inorganic coatings*.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

INTERNATIONAL STANDARD **ISO 8289-2:2019**

Vitreous and porcelain enamels — Low-voltage test for detecting and locating defects —

Part 2: Slurry test for profiled surfaces

1 Scope

This document specifies a low-voltage test method for detecting and locating defects (pores, cracks or pop-offs) that occur in enamel coatings of corrugated and/or undulated profiles and that extend down to the metal base.

The method is based on colour effects (optical method) and is applicable to the precise detection of defects and their exact position. It can be used for non-flat, more profiled shapes such as corrugated or undulated surfaces.

NOTE The low-voltage test is a non-destructive test for detecting defects extending down to the metal base and is, therefore, completely different in comparison to the high-voltage test in accordance with ISO 2746.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 19496-1, *Vitreous and porcelain enamels — Terminology — Part 1: Terms and definitions*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 19496-1 apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at http://www.electropedia.org/

4 Principle

The defects are detected by means of an optical method, which is based on colour effects. The test is performed with low voltage where the contact at the defect is made by a conducting liquid (electrolyte).

5 Test medium

5.1 General

The test medium is a sprayable thixotropic mixture (slurry), which consists of titanium dioxide (anatase), polysaccharide, additive, electrolyte (sodium chloride) and alcoholic (ethanolic) solution of phenolphthalein and which is obtained by grinding.