SLOVENSKI STANDARD
SIST EN ISO 17463:2022

01-september-2022

Nadomešča:
SIST EN ISO 17463:2014

Barve in laki - Smernice za ugotavljanje protikorozijskih lastnosti organskih premazov s pospešeno ciklično elektrokemijsko tehniko (ACET) (ISO 17463:2022)

Paints and varnishes - Guidelines for the determination of anticorrosive properties of organic coatings by accelerated cyclic electrochemical technique (ISO 17463:2022)

Beschichtungsstoffe - Leitfaden zur Bestimmung der antikorrosiven Eigenschaften organischer Beschichtungen durch beschleunigte zyklische elektrochemische Verfahren (ISO 17463:2022)

Peintures et vernis - Lignes directrices pour la détermination des propriétés anticorrosives de revêtements organiques par une technique électrochimique cyclique accélérée (ISO 17463:2022)

Ta slovenski standard je istoveten z: **EN ISO 17463:2022**

ICS:

25.220.60	Organske prevleke	Organic coatings
87.040	Barve in laki	Paints and varnishes

SIST EN ISO 17463:2022 **en,fr,de**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN ISO 17463

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ICS 87.040

Supersedes EN ISO 17463:2014

English Version

Paints and varnishes - Guidelines for the determination of anticorrosive properties of organic coatings by accelerated cyclic electrochemical technique (ISO 17463:2022)

Peintures et vernis - Lignes directrices pour la détermination des propriétés anticorrosives de revêtements organiques par une technique électrochimique cyclique accélérée (ISO 17463:2022)

Beschichtungsstoffe - Leitfaden zur Bestimmung der antikorrosiven Eigenschaften organischer Beschichtungen durch beschleunigte zyklische elektrochemische Verfahren (ISO 17463:2022)

This European Standard was approved by CEN on 17 January 2022.

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

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

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European foreword

This document (EN ISO 17463:2022) has been prepared by Technical Committee ISO/TC 35 "Paints and varnishes" in collaboration with Technical Committee CEN/TC 139 “Paints and varnishes” the secretariat of which is held by DIN.

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 July 2022, and conflicting national standards shall be withdrawn at the latest by July 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.

This document supersedes EN ISO 17463:2014.

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Endorsement notice

The text of ISO 17463:2022 has been approved by CEN as EN ISO 17463:2022 without any modification.

INTERNATIONAL STANDARD

ISO 17463

Second edition
2022-01

Paints and varnishes — Guidelines for the determination of anticorrosive properties of organic coatings by accelerated cyclic electrochemical technique

Peintures et vernis — Lignes directrices pour la détermination des propriétés anticorrosives de revêtements organiques par une technique électrochimique cyclique accélérée

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ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Email: copyright@iso.org
Website: www.iso.org

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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).

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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 35, *Paints and varnishes*, Subcommittee SC 9, *General test methods for paints and varnishes* in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 139, *Paints and varnishes*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This second edition cancels and replaces the first edition (ISO 17463:2014), which has been technically revised.

The main changes are as follows:

— the symbol for the potential has been changed from *U* to *E*;

— the specification of instrumental assembly has been deleted from the list in the scope;

— Bode plots and relaxation curves have been added as examples for the presentation of experimental results in the scope;

— the data presentation has been qualified to equally Nyquist plots in 8.1;

— degradation has been stated more precisely to change in A.2 and A.3;

— the text has been editorially revised and the normative references have been updated.

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.

Introduction

This document describes the determination of the anticorrosive properties of organic coatings by means of the accelerated cyclic electrochemical technique (ACET). The method is based on the so-called AC/DC/AC procedure. This technique allows comparing the protective and anticorrosive properties of different coating systems on metal in short times and in a qualitative and quantitative way. ACET consists of the application of cycles of electrochemical impedance spectroscopy (EIS) measurements, cathodic polarizations and potential relaxation. Degradation of the coating system is accelerated by the cathodic polarization. EIS and potential relaxation monitor the change of the coating system induced by the cathodic polarization. The technique evaluates the permeability of the coating and properties which can be attributed to adhesion to the substrate.