

STN	Kovové povlaky na nekovových základných materiáloch Meranie hrúbky povlaku Metóda mikroodporu (ISO 14571: 2020)	STN EN ISO 14571 03 8529
------------	--	--

Metallic coatings on non-metallic basis materials - Measurement of coating thickness - Micro-resistivity method (ISO 14571:2020)

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 01/23

Obsahuje: EN ISO 14571:2022, ISO 14571:2020

Oznámením tejto normy sa ruší
STN EN 14571 (03 8529) zo septembra 2005

136225

EUROPEAN STANDARD

EN ISO 14571

NORME EUROPÉENNE

EUROPÄISCHE NORM

November 2022

ICS 25.220.40

Supersedes EN 14571:2005

English Version

Metallic coatings on non-metallic basis materials - Measurement of coating thickness - Micro-resistivity method (ISO 14571:2020)

Revêtements métalliques sur matériaux non-
métalliques - Mesurage de l'épaisseur des revêtements
- Méthode utilisant la micro-résistivité (ISO
14571:2020)

Metallische Überzüge auf nichtmetallischen
Grundwerkstoffen - Schichtdickenmessung - Mikro-
Widerstand-Verfahren (ISO 14571:2020)

This European Standard was approved by CEN on 30 October 2022.

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, Türkiye 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

EN ISO 14571:2022 (E)

Contents	Page
European foreword.....	3

European foreword

The text of ISO 14571:2020 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 14571:2022 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 May 2023, and conflicting national standards shall be withdrawn at the latest by May 2023.

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 14571:2005.

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, Türkiye and the United Kingdom.

Endorsement notice

The text of ISO 14571:2020 has been approved by CEN as EN ISO 14571:2022 without any modification.

INTERNATIONAL STANDARD

ISO 14571

First edition
2020-11

Metallic coatings on non-metallic basis materials — Measurement of coating thickness — Micro-resistivity method

*Revêtements métalliques sur matériaux non-métalliques — Mesurage
de l'épaisseur des revêtements — Méthode utilisant la micro-
résistivité*



Reference number
ISO 14571:2020(E)

© ISO 2020

ISO 14571:2020(E)**COPYRIGHT PROTECTED DOCUMENT**

© ISO 2020

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

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

Published in Switzerland

Contents

	Page
Foreword	iv
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Measurement principle	1
5 Factors affecting measurement uncertainty	4
5.1 Range of measurement.....	4
5.2 Coating resistivity.....	4
5.3 Width of the sample.....	4
5.4 Curvature.....	5
5.5 Surface roughness.....	5
5.6 Temperature.....	5
5.7 Probe contact pressure.....	5
6 Calibration of instruments	5
6.1 General.....	5
6.2 Calibration standards.....	6
6.3 Verification.....	6
7 Procedure	6
7.1 General.....	6
7.2 Width of the sample.....	6
7.3 Curvature.....	6
7.4 Number of measurements.....	6
7.5 Surface cleanliness.....	7
8 Accuracy requirements	7
9 Test report	7
Annex A (informative) Method for determining the critical current path width	8
Bibliography	9

ISO 14571:2020(E)

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*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 262, *Metallic and other inorganic coatings, including for corrosion protection and corrosion testing of metals and alloys*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

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.

Metallic coatings on non-metallic basis materials — Measurement of coating thickness — Micro-resistivity method

1 Scope

This document specifies a method for non-destructive measurements of the thickness of conductive coatings on non-conductive base materials. This method is based on the principle of the sheet resistivity measurement and is applicable to any conductive coatings and layers of metal and semiconductor materials. In general, the probe has to be adjusted to the conductivity and the thickness of the respective application. However, this document focuses on metallic coatings on non-conductive base materials (e.g. copper on plastic substrates, printed circuit boards).

This method is also applicable to thickness measurements of conductive coatings on conductive base materials, if the resistivity of the coating and the base material is significantly different. However, this case is not considered in this document.

2 Normative references

There are no normative references in this document.

koniec náhľadu – text ďalej pokračuje v platenej verzii STN