ICS 31.180 SLOVENSKÁ TECHNICKÁ NORMA Október 2020

STN	**Skúšobné metódy na elektrotechnické materiály, dosky s plošnými spojmi a iné spájacie štruktúry a zostavy Časť 5-504: Všeobecné skúšobné metódy na materiály a zostavy Skúšanie procesnej iónovej kontaminácie (PICT)**	**STN EN IEC 61189-5-504** 34 6513

Test methods for electrical materials, printed board and other interconnection structures and assemblies - Part 5-504: General test methods for materials and assemblies - Process ionic contamination testing (PICT)

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. 09/20

Obsahuje: EN IEC 61189-5-504:2020, IEC 61189-5-504:2020

131557

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN IEC 61189-5-504

June 2020

ICS 31.180

English Version

Test methods for electrical materials, printed board and other interconnection structures and assemblies - Part 5-504: General test methods for materials and assemblies - Process ionic contamination testing (PICT) (IEC 61189-5-504:2020)

Méthodes d'essai pour les matériaux électriques, les cartes imprimées et autres structures d'interconnexion et ensembles - Partie 5-504: Méthodes d'essai générales pour les matériaux et les ensembles - Essai de contamination ionique des procédés (PICT) (IEC 61189-5-504:2020)

Prüfverfahren für Elektromaterialien, Leiterplatten und andere Verbindungsstrukturen und Baugruppen - Teil 5-504: Allgemeine Prüfverfahren für Materialien und Baugruppen - Prüfung der ionischen Verunreinigung bei Prozessen (PICT) (IEC 61189-5-504:2020)

This European Standard was approved by CENELEC on 2020-05-26. CENELEC 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 CENELEC 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 CENELEC member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

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

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

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

European foreword

The text of document 91/1639/FDIS, future edition 1 of IEC 61189-5-504, prepared by IEC/TC 91 "Electronics assembly technology" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 61189-5-504:2020.

The following dates are fixed:

• latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement	(dop)	2021-02-26
• latest date by which the national standards conflicting with the document have to be withdrawn	(dow)	2023-05-26

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

Endorsement notice

The text of the International Standard IEC 61189-5-504:2020 was approved by CENELEC as a European Standard without any modification.

Annex ZA
(normative)

Normative references to international publications with their corresponding European publications

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.

NOTE 1 Where an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: www.cenelec.eu.

Publication	Year	Title	EN/HD	Year
IEC 60068-1	-	Environmental testing - Part 1: General and guidance	EN 60068-1	-
IEC 60068-2-20	-	Environmental testing - Part 2-20: Tests - Test T: Test methods for solderability and resistance to soldering heat of devices with leads	EN 60068-2-20	-
IEC 60068-2-58	-	Environmental testing - Part 2-58: Tests - Test Td: Test methods for solderability, resistance to dissolution of metallization and to soldering heat of surface mounting devices (SMD)	EN 60068-2-58	-
IEC 60079-7	-	Explosive atmospheres - Part 7: Equipment protection by increased safety "e"	EN 60079-7	-
IEC 60194	-	Printed board design, manufacture and assembly - Terms and definitions	-	-
IEC 61189-5-502	-	Test methods for electrical materials, printed boards and other interconnection structures and assemblies - Part 5-502: General test methods for materials and assemblies - Surface insulation resistance (SIR) testing of assemblies	-	-
IEC 61190-1-3	-	Attachment materials for electronic assembly - Part 1-3: Requirements for electronic grade solder alloys and fluxed and non-fluxed solid solder for electronic soldering applications	EN IEC 61190-1-3	-
IPC-TM-650 method 2.6.3.7	-	Surface Insulation Resistance	-	-

IPC 9202	-	Material and Process Characterisation / Qualification Test Protocol for Assessing Electrochemical Performance	-	-
IPC 9203	-	Users Guide to IPC 9202 and the IPC-B-52 Standard Test Vehicle	-	-

IEC 61189-5-504

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INTERNATIONAL STANDARD

NORME INTERNATIONALE

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Test methods for electrical materials, printed board and other interconnection structures and assemblies – Part 5-504: General test methods for materials and assemblies – Process ionic contamination testing (PICT)

Méthodes d'essai pour les matériaux électriques, les cartes imprimées et autres structures d'interconnexion et ensembles – Partie 5-504: Méthodes d'essai générales pour les matériaux et les ensembles – Essai de contamination ionique des procédés (PICT)

IEC 61189-5-504:2020-04(en-fr)

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

COMMISSION ELECTROTECHNIQUE INTERNATIONALE

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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TEST METHODS FOR ELECTRICAL MATERIALS, PRINTED BOARDS AND OTHER INTERCONNECTION STRUCTURES AND ASSEMBLIES –

Part 5-504: General test methods for materials and assemblies – Process ionic contamination testing (PICT)

FOREWORD

1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
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International Standard IEC 61189-5-504 has been prepared by IEC technical committee 91: Electronics assembly technology.

The text of this International Standard is based on the following documents:

FDIS	Report on voting
91/1639/FDIS	91/1644/RVD

Full information on the voting for the approval of this International Standard can be found in the report on voting indicated in the above table.

This document has been drafted in accordance with the ISO/IEC Directives, Part 2.

A list of all parts in the IEC 61189 series, published under the general title *Test methods for electrical materials, printed boards and other interconnection structures and assemblies*, can be found on the IEC website.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under "http://webstore.iec.ch" in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

IMPORTANT – The 'colour inside' logo on the cover page of this publication indicates that it contains colours which are considered to be useful for the correct understanding of its contents. Users should therefore print this document using a colour printer.

TEST METHODS FOR ELECTRICAL MATERIALS, PRINTED BOARDS AND OTHER INTERCONNECTION STRUCTURES AND ASSEMBLIES –

Part 5-504: General test methods for materials and assemblies – Process ionic contamination testing (PICT)

1 Scope

This part of IEC 61189 is a test method designed to determine the proportion of soluble ionic residues present upon a circuit board, electronic component or assembly. The conductivity of the solution used to dissolve the ionic residues is measured to evaluate the level of ionic residues.

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.

IEC 60068-1, *Environmental testing – General and guidance*

IEC 60068-2-20, *Environmental testing – Part 2-20: Tests – Test T: Test methods for solderability and resistance to soldering heat of devices with leads*

IEC 60068-2-58, *Environmental testing – Part 2-58: Tests – Test Td: Test methods for solderability, resistance to dissolution of metallization and to soldering heat of surface mounting devices (SMD)*

IEC 60079-7, *Explosive atmospheres – Part 7: Equipment protection by increased safety "e"*

IEC 60194, *Printed board design, manufacture and assembly – Terms and definitions*

IEC 61189-5-502, *Test methods for electrical materials, printed boards and other interconnection structures and assemblies – Part 5-502: General test methods for materials and assemblies – Surface insulation resistance (SIR) testing of assemblies*

IEC 61190-1-3, *Attachment materials for electronic assembly – Part 1-3: Requirements for electronic grade solder alloys and fluxed and non-fluxed solid solder for electronic soldering applications*

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IPC 9202, *Material and Process Characterisation / Qualification Test Protocol for Assessing Electrochemical Performance*

IPC 9203, *Users Guide to IPC 9202 and the IPC-B-52 Standard Test Vehicle*