
Preskusne metode za električne materiale, tiskane plošče ter druge povezovalne strukture in sestave - 5-504. del: Splošne preskusne metode za materiale in sestave – Preskušanje procesa ionskega onesnaženja (PICT)

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)

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EUROPEAN STANDARD

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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)
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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)

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Europäisches Komitee für Elektrotechnische Normung

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

EN IEC 61189-5-504:2020 (E)**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- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2023-05-26

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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.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
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	-	-

EN IEC 61189-5-504:2020 (E)

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	-	-

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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)**

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**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 –
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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**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

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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
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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)

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.

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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*

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*