
**Prešpanske plošče in prešpanski papir za električne namene – 2. del:
Preskusne metode (IEC 60641-2:2004)**

Pressboard and presspaper for electrical purposes - Part 2: Methods of test (IEC 60641-2:2004)

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English version

Pressboard and presspaper for electrical purposes
Part 2: Methods of tests
(IEC 60641-2:2004)

Carton comprimé et papier comprimé
à usages électriques
Partie 2: Méthodes d'essai
(CEI 60641-2:2004)

Tafel- und Rollenpressspan
für elektrotechnische Anwendungen
Teil 2: Prüfverfahren
(IEC 60641-2:2004)

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This European Standard was approved by CENELEC on 2004-09-01. 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 Central Secretariat 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 Central Secretariat has the same status as the official versions.

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

CENELEC

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

Central Secretariat: rue de Stassart 35, B - 1050 Brussels

Foreword

The text of document 15C/1609/FDIS, future edition 2 of IEC 60641-2, prepared by SC 15C, Specifications, of IEC TC 15, Insulating materials, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 60641-2 on 2004-09-01.

This European Standard supersedes EN 60641-2:1995.

The main changes with respect to EN 60641-2:1995 are listed below:

The following test methods have been cancelled:

- flexibility;
- conductivity of the organic extract;
- contamination of liquid dielectrics.

The following test methods have been rewritten:

- compressibility;
- conductivity of the aqueous extract;
- cohesion between plies.

The following test method has been introduced:

- determination of metallic particles with X-ray.

The following dates were fixed:

- latest date by which the EN has to be implemented
at national level by publication of an identical
national standard or by endorsement (dop) 2005-06-01
- latest date by which the national standards conflicting
with the EN have to be withdrawn (dow) 2007-09-01

Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 60641-2:2004 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following notes have to be added for the standards indicated:

IEC 60247	NOTE	Harmonized as EN 60247:2004 (not modified).
ISO 186	NOTE	Harmonized as EN ISO 186:2002 (not modified).

Annex ZA (normative)

Normative references to international publications with their corresponding European publications

The following referenced documents are indispensable for the application 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 Where an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60243-1	1998	Electrical strength of insulating materials - Test methods Part 1: Tests at power frequencies	EN 60243-1	1998
IEC 60296	2003	Fluids for electrotechnical applications - Unused mineral insulating oils for transformers and switchgear	EN 60296 + corr. September	2004 2004
IEC 60554-2	2001	Cellulosic papers for electrical purposes Part 2: Methods of test	EN 60554-2	2002
ISO 287	1985	Paper and board - Determination of moisture content - Oven-drying method	EN 20287	1994
ISO 534	1988	Paper and board - Determination of thickness and apparent bulk density or apparent sheet density	EN 20534	1993
ISO 1924-2	1994	Paper and board - Determination of tensile properties Part 2: Constant rate of elongation method	EN ISO 1924-2	1995
ISO 1974	1990	Paper - Determination of tearing resistance (Elmendorf method)	EN 21974	1994
ISO 2144	1997	Paper, board and pulps - Determination of residue (ash) on ignition at 900 degrees C	-	-

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NORME
INTERNATIONALE
INTERNATIONAL
STANDARD

CEI
IEC

60641-2

Deuxième édition
Second edition
2004-06

**Carton comprimé et papier comprimé
à usages électriques –**

**Partie 2:
Méthodes d'essai**

iTeh STANDARD PREVIEW

**Pressboard and presspaper
for electrical purposes –**

SIST EN 60641-2:2005

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**Part 2:
Methods of tests**

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International Electrotechnical Commission
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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**PRESSBOARD AND PRESSPAPER
FOR ELECTRICAL PURPOSES –****Part 2: Methods of tests****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 60641-2 has been prepared by subcommittee 15C: Specifications, of IEC technical committee 15: Insulating materials.

This second edition cancels and replaces the first edition, published in 1979, and amendment 1 (1993). This edition constitutes a technical revision.

The main changes with respect to the previous edition are listed below:

The following test methods have been cancelled:

- Flexibility
- Conductivity of the organic extract
- Contamination of liquid dielectrics

The following test methods have been rewritten:

- Compressibility
- Conductivity of the aqueous extract
- Cohesion between plies

The following test method has introduced:

- Determination of metallic particles with X-ray.

The text of this standard is based on the following documents:

FDIS	Report on voting
15C/1609IFDIS	15C/1642/RVD

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

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

IEC 60641 consists of the following parts, under the general title *Pressboard and presspaper for electrical purposes*:

Part 1: Definition and general requirements (IEC 60641-1)

Part 2: Methods of test (IEC 60641-2)

Part 3: Specifications for individual materials (IEC 60641-3)

Sheet 1: Pressboard

Sheet 2: Presspaper

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

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

PRESSBOARD AND PRESSPAPER FOR ELECTRICAL PURPOSES –

Part 2: Methods of tests

1 Scope

This part of IEC 60641 applies to pressboard and presspaper for electrical purposes.

The series does not apply to laminated material.

This part specifies the test methods to be used in testing pressboard and presspaper for electrical purposes to meet the requirements prescribed in the specification sheets of Part 3.

NOTE In this standard, reference is made in several places to ISO standards accompanied by a short description of the method used. It is to be understood that this short description is meant for identification purposes only and that all details should be taken from the ISO standard itself.

2 Normative references

The following referenced documents are indispensable for the application 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 60243-1:1998, *Electrical strength of insulating materials – Test methods – Part 1: Tests at power frequencies*

IEC 60296:2003, *Fluids for electrotechnical applications – Unused mineral insulating oils for transformers and switchgear*

IEC 60554-2:2001, *Cellulosic papers for electrical purposes – Part 2: Methods of test*

ISO 287:1985, *Paper and board – Determination of moisture content – Oven-drying method*

ISO 534:1988, *Paper and board – Determination of thickness and apparent bulk density or apparent sheet density*

ISO 1924-2:1994, *Paper and board – Determination of tensile properties – Part 2: Constant rate of elongation method*

ISO 1974:1990, *Paper – Determination of tearing resistance (Elmendorf method)*

ISO 2144:1997, *Paper, board and pulps – Determination of residue (ash) on ignition at 900 degrees C*