IEC 60893-2

Edition 3.0 2023-11

INTERNATIONAL STANDARD

NORME INTERNATIONALE

Insulating materials – Industrial rigid laminated sheets based on thermosetting resins for electrical purposes – Part 2: Methods of test

Matériaux isolants – Stratifiés industriels rigides en planches à base de résines thermodurcissables à usages électriques – Partie 2: Méthodes d'essai



IEC 60893-2:2023-11 (en-fr)



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INSULATING MATERIALS – INDUSTRIAL RIGID LAMINATED SHEETS BASED ON THERMOSETTING RESINS FOR ELECTRICAL PURPOSES –

Part 2: Methods of test

FOREWORD

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IEC 60893-2 has been prepared by IEC technical committee 15: Solid electrical insulating materials. It is an International Standard.

This third edition cancels and replaces the second edition published in 2003. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

a) removal of reference to withdrawn specification IEC 60167:1964;

b) inclusion of reference to IEC 62631-3-3:2015, which supersedes IEC 60167:1964. Details in 6.3 have been updated accordingly. The actual performance of the test has not changed;

c) normative references have been updated.

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

Draft	Report on voting
15/1017/FDIS	15/1023/RVD

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

The language used for the development of this International Standard is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/publications.

A list of all parts in the IEC 60893 series, published under the general title *Insulating materials – Industrial rigid laminated sheets based on thermosetting resins for electrical purposes*, 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 webstore.iec.ch in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn, or
- revised.

INTRODUCTION

This document is one of a series which deals with industrial rigid laminated sheets based on thermosetting resins for electrical purposes.

This series consists of four parts:

- Part 1: Definitions, designations and general requirements (IEC 60893-1);
- Part 2: Methods of test (IEC 60893-2);
- Part 3: Specifications for individual materials (IEC 60893-3);
- Part 4: Typical values (IEC TR 60893-4).

INSULATING MATERIALS – INDUSTRIAL RIGID LAMINATED SHEETS BASED ON THERMOSETTING RESINS FOR ELECTRICAL PURPOSES –

Part 2: Methods of test

1 Scope

This part of IEC 60893 describes methods of test for the materials defined in IEC 60893-1 (referred to also as Part 1).

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 60112, *Method for the determination of the proof and the comparative tracking indices of solid insulating materials*

IEC 60212:2010, *Standard conditions for use prior to and during the testing of solid electrical insulating materials*

IEC 60216-1:2013, *Electrical insulating materials – Thermal endurance properties – Part 1: Ageing procedures and evaluation of test results*

IEC 60243-1:2013*, Electric strength of insulating materials – Test methods – Part 1: Tests at power frequencies*

IEC 60296:2012[1], *Fluids for electrotechnical applications – Unused mineral insulating oils for transformers and switchgear*

IEC 60587:2007[2], *Electrical insulating materials used under severe ambient conditions – Test methods for evaluating resistance to tracking and erosion*

IEC 60695-11-10:2013, *Fire hazard testing – Part 11-10: Test flames – 50 W horizontal and vertical flame test methods*

IEC 60893-1, *Insulating materials – Industrial rigid laminated sheets based on thermosetting resins for electrical purposes – Part 1: Definitions, designations and general requirements*

IEC 60893-3 (all parts), *Insulating materials – Industrial rigid laminated sheets based on thermosetting resins for electrical purposes – Part 3: Specifications for individual materials*

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1 A fifth edition of this standard has been published in 2020.

2 A fourth edition of this standard has been published in 2022.

IEC TR 60893-4, *Insulating materials – Industrial rigid laminated sheets based on thermosetting resins for electrical purposes – Part 4: Typical values*

IEC 62631-3-3:2015, *Dielectric and resistive properties of solid insulating materials – Part 3-3: Determination of resistive properties (DC methods) – Insulation resistance*

ISO 62:2008, *Plastics – Determination of water absorption*

ISO 178:2010[3], *Plastics – Determination of flexural properties*

ISO 179-1:2000[4], *Plastics – Determination of Charpy impact properties – Part 1: Non-instrumented impact test*

ISO 179-2:1997[5], *Plastics – Determination of Charpy impact properties – Part 2: Instrumented impact test*

ISO 180:2000[6], *Plastics – Determination of Izod impact strength*

ISO 527-1:2012[7], *Plastics – Determination of tensile properties – Part 1: General principles*

ISO 527-4:1997[8], *Plastics – Determination of tensile properties – Part 4: Test conditions for isotropic and orthotropic fibre-reinforced plastic composites*

ISO 604:2002, *Plastics – Determination of compressive properties*

ISO 1183-1:2012[9], *Plastics – Methods for determining the density of non-cellular plastics – Part 1: Immersion method, liquid pyknometer method and titration method*

ISO 3611:2010[10], *Geometrical product specifications (GPS) – Dimensional measuring equipment: Micrometers for external measurements – Design and metrological characteristics*

3 Terms and definitions

No terms and definitions are listed in this document.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

- IEC Electropedia: available at https://www.electropedia.org/
- ISO Online browsing platform: available at https://www.iso.org/obp

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3 A sixth edition of this standard has been published in 2019.

4 A third edition of this standard has been published in 2023.

5 A second edition of this standard has been published in 2020.

6 A fifth edition of this standard has been published in 2023.

7 A third edition of this standard has been published in 2019.

8 A third edition of this standard has been published in 2023.

9 A third edition of this standard has been published in 2019.

10 A third edition of this standard has been published in 2023.