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REDLINE VERSION

**Fasta isolermaterial –
Dielektriska och resistiva egenskaper –
Del 3-1: Bestämning av resistiva egenskaper (likströmsmetoder) –
Volymresistans och volymresistivitet –
Generell metod**

*Dielectric and resistive properties of solid insulating materials –
Part 3-1: Determination of resistive properties (DC methods) –
Volume resistance and volume resistivity –
General method*

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IEC 62631-3-1

Edition 2.0 2023-01
REDLINE VERSION

INTERNATIONAL STANDARD



**Dielectric and resistive properties of solid insulating materials –
Part 3-1: Determination of resistive properties (DC methods) – Volume
resistance and volume resistivity – General method**

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

ICS 17.220.99; 29.035.01

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**DIELECTRIC AND RESISTIVE PROPERTIES
OF SOLID INSULATING MATERIALS –****Part 3-1: Determination of resistive properties (DC methods) –
Volume resistance and volume resistivity – General method**

FOREWORD

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This redline version of the official IEC Standard allows the user to identify the changes made to the previous edition IEC 62631-3-1:2016. A vertical bar appears in the margin wherever a change has been made. Additions are in green text, deletions are in strikethrough red text.

IEC 62631-3-1 has been prepared by IEC technical committee 112: Evaluation and qualification of electrical insulating materials and systems. It is an International Standard.

This second edition cancels and replaces the first edition published in 2016. This edition constitutes a technical revision.

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

- a) following the withdrawal of IEC 60093 and its partial replacement with the first edition of IEC 62631-3-1, the missing editorial and technical texts have been added and incorporated into this second edition of IEC 62631-3-1;
- b) the alignment of normative texts and informative notes have been addressed as well as the normative references and bibliography.

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

Draft	Report on voting
112/597/FDIS	112/604/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 62631 series, published under the general title *Dielectric and resistive properties of solid insulating materials*, 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,
- replaced by a revised edition, or
- amended.

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DIELECTRIC AND RESISTIVE PROPERTIES OF SOLID INSULATING MATERIALS –

Part 3-1: Determination of resistive properties (DC methods) – Volume resistance and volume resistivity – General method

1 Scope

This part of IEC 62631 ~~covers~~ specifies a method of test for the determination of volume resistance and volume resistivity of electrical ~~insulation~~ insulating materials by applying a DC voltage.

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

~~IEC 60455 (all parts), Resin based reactive compounds used for electrical insulation~~

IEC 60455-2, *Resin based reactive compounds used for electrical insulation – Part 2: Methods of test*

~~IEC 60464 (all parts), Varnishes used for electrical insulation~~

IEC 60464-2, *Varnishes used for electrical insulation – Part 2: Methods of test*

~~IEC 61212 (all parts), Industrial materials – Industrial rigid round laminated tubes and rods based on thermosetting resins for electrical purposes~~

IEC 61212-2, *Industrial materials – Industrial rigid round laminated tubes and rods based on thermosetting resins for electrical purposes – Part 2: Methods of test*

~~ISO 868, Plastics and ebonite – Determination of indentation hardness by means of a durometer (Shore hardness)~~

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*Dielectric and resistive properties of solid insulating materials –
Part 3-1: Determination of resistive properties (DC methods) –
Volume resistance and volume resistivity –
General method*

Som svensk standard gäller europastandarden EN IEC 62631-3-1:2023. Den svenska standarden innehåller den officiella engelska språkversionen av EN IEC 62631-3-1:2023.

Nationellt förord

Europastandarden EN IEC 62631-3-1:2023

består av:

- **europastandardens ikraftsättningsdokument**, utarbetat inom CENELEC
- **IEC 62631-3-1, Second edition, 2023 - Dielectric and resistive properties of solid insulating materials – Part 3-1: Determination of resistive properties (DC methods) – Volume resistance and volume resistivity – General method**

utarbetad inom International Electrotechnical Commission, IEC.

Tidigare fastställd svensk standard SS-EN 62631-3-1, utg 1:2016 med eventuella tillägg, ändringar och rättelser gäller ej fr o m 2026-02-27.

ICS 17.220.99; 29.035.01

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Box 1284
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Tel 08-444 14 00
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English Version

**Dielectric and resistive properties of solid insulating materials -
Part 3-1: Determination of resistive properties (DC methods) -
Volume resistance and volume resistivity - General method
(IEC 62631-3-1:2023)**

Propriétés diélectriques et résistives des matériaux isolants solides - Partie 3-1: Détermination des propriétés résistives (méthodes en courant continu) - Résistance volumique et résistivité volumique - Méthode générale (IEC 62631-3-1:2023)

Dielektrische und resistive Eigenschaften fester Isolierstoffe - Teil 3-1: Bestimmung resistiver Eigenschaften (Gleichspannungsverfahren) - Durchgangswiderstand und spezifischer Durchgangswiderstand - Basisverfahren (IEC 62631-3-1:2023)

This European Standard was approved by CENELEC on 2023-02-27. 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.

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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 112/597/FDIS, future edition 2 of IEC 62631-3-1, prepared by IEC/TC 112 "Evaluation and qualification of electrical insulating materials and systems" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 62631-3-1:2023.

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) 2023-11-27
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2026-02-27

This document supersedes EN 62631-3-1:2016 and all of its amendments and corrigenda (if any).

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Endorsement notice

The text of the International Standard IEC 62631-3-1:2023 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following note has to be added for the standard indicated:

IEC 62631-3-11 NOTE Approved as EN IEC 62631-3-11

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 60212	-	Standard conditions for use prior to and during the testing of solid electrical insulating materials	EN 60212	-
IEC 60455-2	-	Resin based reactive compounds used for electrical insulation - Part 2: Methods of test	EN 60455-2	-
IEC 60464-2	-	Varnishes used for electrical insulation - Part 2: Methods of test	EN 60464-2	-
IEC 61212-2	-	Insulating materials - Industrial rigid round laminated tubes and rods based on thermosetting resins for electrical purposes - Part 2: Methods of test	EN 61212-2	-

INTERNATIONAL STANDARD

NORME INTERNATIONALE

**Dielectric and resistive properties of solid insulating materials –
Part 3-1: Determination of resistive properties (DC methods) – Volume
resistance and volume resistivity – General method**

**Propriétés diélectriques et résistives des matériaux isolants solides –
Partie 3-1: Détermination des propriétés résistives (méthodes en courant
continu) – Résistance volumique et résistivité volumique – Méthode générale**

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**DIELECTRIC AND RESISTIVE PROPERTIES
OF SOLID INSULATING MATERIALS –****Part 3-1: Determination of resistive properties (DC methods) –
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DIELECTRIC AND RESISTIVE PROPERTIES OF SOLID INSULATING MATERIALS –

Part 3-1: Determination of resistive properties (DC methods) – Volume resistance and volume resistivity – General method

1 Scope

This part of IEC 62631 specifies a method of test for the determination of volume resistance and volume resistivity of electrical insulating materials by applying a DC voltage.

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 60455-2, *Resin based reactive compounds used for electrical insulation – Part 2: Methods of test*

IEC 60464-2, *Varnishes used for electrical insulation – Part 2: Methods of test*

IEC 61212-2, *Industrial materials – Industrial rigid round laminated tubes and rods based on thermosetting resins for electrical purposes – Part 2: Methods of test*