

Dielectric and resistive properties of solid insulating materials - Part 3-12: Determination of resistive properties (DC methods) - Volume resistance and volume resistivity - Method for casting resins

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

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ICS 17.220.99, 29.035.01

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ICS 17.220.99; 29.035.01

English Version

Dielectric and resistive properties of solid insulating materials -
Part 3-12: Determination of resistive properties (DC methods) -
Volume resistance and volume resistivity - Method for casting
resins
(IEC 62631-3-12:2024)

Propriétés diélectriques et résistives des matériaux isolant
solides - Partie 3-12: Détermination des propriétés
résistives (méthodes en courant continu) - Résistance
volumique et résistivité volumique - Méthode pour résines
de coulée
(IEC 62631-3-12:2024)

Dielektrische und resistive Eigenschaften fester
Elektroisolierstoffe - Teil 3-12: Bestimmung der resistiven
Eigenschaften (Gleichstromverfahren) - Volumenwiderstand
und Durchgangswiderstand, Verfahren für Gießharze
(IEC 62631-3-12:2024)

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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 112/645/FDIS, future edition 1 of IEC 62631-3-12, 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 62631-3-12:2024.

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IEC 60455-3-1 NOTE Approved as EN 60455-3-1

IEC 60455-3-2 NOTE Approved as EN 60455-3-2

IEC 60455-3-3 NOTE Approved as EN 60455-3-3

IEC 60455-3-4 NOTE Approved as EN 60455-3-4

IEC 60455-3-8 NOTE Approved as EN IEC 60455-3-8

INTERNATIONAL STANDARD

NORME INTERNATIONALE

**Dielectric and resistive properties of solid insulating materials –
Part 3-12: Determination of resistive properties (DC methods) – Volume
resistance and volume resistivity – Method for casting resins**

**Propriétés diélectriques et résistives des matériaux isolant solides –
Partie 3-12: Détermination des propriétés résistives (méthodes en courant
continu) – Résistance volumique et résistivité volumique – Méthode pour
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INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

COMMISSION
ELECTROTECHNIQUE
INTERNATIONALE

ICS 17.220.99, 29.035.01

ISBN 978-2-8322-9299-0

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**DIELECTRIC AND RESISTIVE PROPERTIES
OF SOLID INSULATING MATERIALS –**
**Part 3-12: Determination of resistive properties (DC methods) –
Volume resistance and volume resistivity – Method for casting resins**
FOREWORD

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IEC 62631-3-12 has been prepared by IEC technical committee 112: Evaluation and qualification of electrical insulating materials and systems. It is an International Standard.

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

Draft	Report on voting
112/645/FDIS	112/652/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,
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INTRODUCTION

Many segments of the electrotechnical industry use volume resistance and volume resistivity data of solid insulating materials. This part of the IEC 62631-3 series is focused on the method for casting resins. Clear guidelines will provide the user of this document a uniform approach to sample preparation and test procedures.

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DIELECTRIC AND RESISTIVE PROPERTIES OF SOLID INSULATING MATERIALS –

Part 3-12: Determination of resistive properties (DC methods) – Volume resistance and volume resistivity – Method for casting resins

1 Scope

This part of IEC 62631 specifies a method of test for the determination of volume resistance and volume resistivity of electrical insulation materials by applying a DC voltage. It covers casting resins described in IEC 60455-3-1, IEC 60455-3-2, IEC 60455-3-3, IEC 60455-3-4, IEC 60455-3-8 and similar products.

For other specific types of materials, other standards or the general method described in IEC 62631-3-1 can be more suitable.

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

ISO 2808, *Paints and varnishes – Determination of film thickness*

3 Terms and definitions

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- IEC Electropedia: available at <https://www.electropedia.org/>
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3.1

volume resistance

part of the insulation resistance which is due to conduction through the volume

Note 1 to entry: Volume resistance is expressed in Ω .