

# 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  
résines de coulée**



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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

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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](http://www.iec.ch/members_experts/refdocs). The main document types developed by IEC are described in greater detail at [www.iec.ch/publications](http://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](http://webstore.iec.ch) in the data related to the specific document. At this date, the document will be

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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

For the purposes of this document, the following terms and definitions apply.

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>

##### 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  $\Omega$ .