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Edition 1.0 2018-01

INTERNATIONAL STANDARD

NORME INTERNATIONALE

Dielectric and resistive properties of solid insulating materials – Part 3-11: Determination of resistive properties (DC methods) – Volume resistance and volume resistivity – Method for impregnation and coating materials

Propriétés diélectriques et résistives des matériaux isolants solides – Partie 3-11: Détermination des propriétés résistives (méthodes en courant continu) – Résistance volumique et résistivité volumique – Méthode pour matériaux d'imprégnation et de revêtement

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IEC Central Office
3, rue de Varembé
CH-1211 Geneva 20
Switzerland

Tel.: +41 22 919 02 11
info@iec.ch
www.iec.ch

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Part 3-11: Determination of resistive properties (DC methods) – Volume resistance and volume resistivity – Method for impregnation and coating materials

FOREWORD

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International Standard IEC 62631-3-11 has been prepared by IEC technical committee 112: Evaluation and qualification of electrical insulating materials and systems.

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

FDIS	Report on voting
112/409/FDIS	112/415/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.

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.

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

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC website 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- withdrawn,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.

INTRODUCTION

Many segments of the electrotechnical industry need volume resistance and volume resistivity data of solid insulating materials. This part of IEC 62631 is focused on the method for impregnation and coating materials. Clear guidelines are important to give the user of this document a uniform approach to sample preparation and test procedures.

DIELECTRIC AND RESISTIVE PROPERTIES OF SOLID INSULATING MATERIALS –

Part 3-11: Determination of resistive properties (DC methods) – Volume resistance and volume resistivity – Method for impregnation and coating materials

1 Scope

This part of IEC 62631 covers a method of test for the determination of volume resistance and volume resistivity of electrical insulation materials by applying DC voltage. It covers the materials described in IEC 60455-3-5, IEC 60464-3-1, IEC 60464-3-2 and similar products.

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 1514, *Paints and varnishes – Standard panels for testing*

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 terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at http://www.electropedia.org/
- ISO Online browsing platform: available at http://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 Ω.

3.2
volume resistivity
volume resistance of a material related to its volume

Note 1 to entry: Volume resistivity is expressed in Ωm.

Note 2 to entry: For insulating materials the volume resistivity is usually determined by means of measuring electrodes arranged on a sheet of the material.