

Electrical insulating materials used under severe ambient conditions - Test methods for evaluating resistance to tracking and erosion

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 60587:2007 sisaldab Euroopa standardi EN 60587:2007 ingliskeelset teksti.

Standard on kinnitatud Eesti Standardikeskuse 13.09.2007 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.

Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 04.07.2007.

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This Estonian standard EVS-EN 60587:2007 consists of the English text of the European standard EN 60587:2007.

This standard is ratified with the order of Estonian Centre for Standardisation dated 13.09.2007 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.

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**Electrical insulating materials
used under severe ambient conditions -
Test methods for evaluating resistance to tracking and erosion
(IEC 60587:2007)**

Matériaux isolants électriques utilisés
dans des conditions ambiantes sévères -
Méthodes d'essai pour évaluer
la résistance au cheminement
et à l'érosion
(CEI 60587:2007)

Elektroisolierstoffe, die unter erschwerten
Bedingungen eingesetzt werden -
Prüfverfahren zur Bestimmung
der Beständigkeit gegen
Kriechwegbildung und Erosion
(IEC 60587:2007)

This European Standard was approved by CENELEC on 2007-06-01. 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.

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European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

Central Secretariat: rue de Stassart 35, B - 1050 Brussels

Foreword

The text of document 112/56/FDIS, future edition 3 of IEC 60587, prepared by IEC TC 112, Evaluation and qualification of electrical insulating materials and systems, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 60587 on 2007-06-01.

This European Standard supersedes HD 380 S2:1987.

The main changes from HD 380 S2:1987 are as follows:

- experience has indicated the need for improved description of the experimental method;
- for the preparation of the test specimens, abrasion is recommended only if necessary;
- the ventilation of the test chamber is described in detail;
- for specimens of soft elastomeric materials a mounting support is described;
- the maximum depth of erosion has to be reported in the classification.

The following dates were fixed:

- | | | |
|--|-------|------------|
| – latest date by which the EN has to be implemented at national level by publication of an identical national standard or by endorsement | (dop) | 2008-03-01 |
| – latest date by which the national standards conflicting with the EN have to be withdrawn | (dow) | 2010-06-01 |

Endorsement notice

The text of the International Standard IEC 60587:2007 was approved by CENELEC as a European Standard without any modification.

INTERNATIONAL STANDARD

IEC
60587

Third edition
2007-05

**Electrical insulating materials
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to tracking and erosion**

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IEC Central Office
3, rue de Varembe
CH-1211 Geneva 20
Switzerland
Email: inmail@iec.ch
Web: www.iec.ch

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Commission Electrotechnique Internationale
International Electrotechnical Commission
Международная Электротехническая Комиссия

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**ELECTRICAL INSULATING MATERIALS
USED UNDER SEVERE AMBIENT CONDITIONS –
TEST METHODS FOR EVALUATING RESISTANCE TO TRACKING
AND EROSION**

FOREWORD

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International Standard IEC 60587 has been prepared by IEC technical committee 112: Evaluation and qualification of electrical insulating materials and systems.

This third edition cancels and replaces the second edition, published in 1984, and constitutes a technical revision. The main changes from the previous edition are as follows: experience has indicated the need for improved description of the experimental method. For the preparation of the test specimens abrasion is recommended only if necessary. The ventilation of the test chamber is described in detail. For specimens of soft elastomeric materials a mounting support is described. The maximum depth of erosion has to be reported in the classification.

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

FDIS	Report on voting
112/56/FDIS	112/61A/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.

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 maintenance result date indicated on the IEC web site under "<http://webstore.iec.ch>" in the data related to the specific publication. At this date, the publication will be

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ELECTRICAL INSULATING MATERIALS USED UNDER SEVERE AMBIENT CONDITIONS – TEST METHODS FOR EVALUATING RESISTANCE TO TRACKING AND EROSION

1 Scope

This International standard describes two test methods for the evaluation of electrical insulating materials for use under severe ambient conditions at power frequencies (45 Hz to 65 Hz) by measurement of the resistance to tracking and erosion, using a liquid contaminant and inclined plane specimens. The two methods are as follows:

- Method 1: constant tracking voltage;
- Method 2: stepwise tracking voltage.

NOTE 1 Method 1 is the most widely used method as there is less need for continual inspection.

NOTE 2 The test conditions are designed to accelerate the production of the effects, but do not reproduce all the conditions encountered in service.

2 Terms and definitions

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

2.1

track

partially conducting path created by localized deterioration on the surface of an insulating material

2.2

tracking

progressive degradation of the surface of a solid insulating material by local discharges to form conducting or partially conducting paths

NOTE Tracking usually occurs due to surface contamination.

[IEC 60050-212-01-42¹]

2.3

erosion, electrical

loss of material by leakage current or electrical discharge

2.4

time-to-track

time required to produce tracks under the specified conditions of test

¹ IEC 60050-212:1990, *International Electrotechnical Vocabulary – Chapter 212: Insulating solids, liquids and gases*