

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

The European Standard EN 60587:2007 has the status of a British Standard

ICS 17.220.99; 29.035.01

National foreword

This British Standard is the UK implementation of EN 60587:2007. It is identical to IEC 60587:2007. It supersedes BS 5604:1986 which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee GEL/112, Evaluation and qualification of electrical insulating materials and systems.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

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Amendments issued since publication

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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.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CENELEC member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the Central Secretariat has the same status as the official versions.

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CENELEC

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

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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.

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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*