SLOVENSKI STANDARD

SIST EN 60216-5:2004

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Electrical insulating materials - Thermal endurance properties - Part 5: Determination of relative thermal endurance index (RTE) of an insulating material (IEC 60216-5:2003)

ICS 29.035.01

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EUROPEAN STANDARD **EN 60216-5**

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ICS 19.020; 29.020; 29.035.01

Supersedes HD 611.5 S1:1992

English version

Electrical insulating materials – Thermal endurance properties Part 5: Determination of relative thermal endurance index (RTE) of an insulating material

(IEC 60216-5:2003)

Matériaux isolants électriques – Propriétés d'endurance thermique Partie 5: Détermination de l'indice d'endurance thermique relatif (RTE) d'un matériau isolant (CEI 60216-5:2003)

Elektroisolierstoffe – Eigenschaften hinsichtlich des thermischen Langzeitverhaltens Teil 5: Bestimmung des relativen thermischen Lebensdauer-Indexes (RTE) von Elektroisolierstoffen (IEC 60216-5:2003)

This European Standard was approved by CENELEC on 2003-03-01. 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.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland and United Kingdom.

CENELEC

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 15E/208/FDIS, future edition 2 of IEC 60216-5, prepared by SC 15E, Methods of test, of IEC TC 15, Insulating materials, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 60216-5 on 2003-03-01.

This European Standard supersedes HD 611.5 S1:1992.

This standard is to be read in conjunction with EN 60216-1, IEC 60216-2 and EN 60216-3.

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) 2003-12-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2006-03-01

Annexes designated "normative" are part of the body of the standard.
Annexes designated "informative" are given for information only.
In this standard, annex ZA is normative and annexes A, B and C are informative.
Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 60216-5:2003 was approved by CENELEC as a European Standard without any modification.

Annex ZA
(normative)

Normative references to international publications with their corresponding European publications

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

NOTE When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

Publication	Year	Title	EN/HD	Year
IEC 60216-1	2001	Electrical insulating materials - Properties of thermal endurance Part 1: Ageing procedures and evaluation of test results	EN 60216-1	2001
IEC 60216-2	1990	Part 2: Choice of test criteria	HD 611.2 S1	1992
IEC 60216-3	2002	Part 3: Instructions for calculating thermal endurance characteristics	EN 60216-3	2002

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Matériaux isolants électriques – Propriétés d'endurance thermique –

Partie 5: Détermination de l'indice d'endurance thermique relatif (RTE) d'un matériau isolant

Electrical insulating materials – Thermal endurance properties –

Part 5: Determination of relative thermal endurance index (RTE) of an insulating material

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Международная Электротехническая Комиссия

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

ELECTRICAL INSULATING MATERIALS – THERMAL ENDURANCE PROPERTIES –

Part 5: Determination of relative thermal endurance index (RTE) of an insulating material

FOREWORD

1) The IEC (International Electrotechnical Commission) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of the IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, the IEC publishes International Standards. Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. The IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
2) The formal decisions or agreements of the IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested National Committees.
3) The documents produced have the form of recommendations for international use and are published in the form of standards, technical specifications, technical reports or guides and they are accepted by the National Committees in that sense.
4) In order to promote international unification, IEC National Committees undertake to apply IEC International Standards transparently to the maximum extent possible in their national and regional standards. Any divergence between the IEC Standard and the corresponding national or regional standard shall be clearly indicated in the latter.
5) The IEC provides no marking procedure to indicate its approval and cannot be rendered responsible for any equipment declared to be in conformity with one of its standards.
6) Attention is drawn to the possibility that some of the elements of this International Standard may be the subject of patent rights. The IEC shall not be held responsible for identifying any or all such patent rights.

International Standard IEC 60216-5 has been prepared by subcommittee 15E: Methods of test, of IEC technical committee 15: Insulating materials.

This second edition cancels and replaces the first edition, published in 1990, and constitutes a technical revision.

The second edition differs from the first in that it no longer aims to provide general guidance on application of thermal endurance characteristics, but provides instructions for deriving a provisional estimate of the temperature up to which a material may give satisfactory performance in an application (by comparative thermal ageing with a material of known performance).

This standard is to be read in conjunction with IEC 60216-1, IEC 60216-2 and IEC 60216-3.

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

FDIS	Report on voting
15E/208/FDIS	15E/212/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.

IEC 60216, under the general title *Electrical insulating materials – Thermal endurance properties*, consists of the following parts:

Part 1: Ageing procedures and evaluation of test results

Part 2: Choice of test criteria

Part 3: Instructions for calculating thermal endurance characteristics

Part 4: Ageing ovens

Part 5: Determination of relative thermal endurance index (RTE) of an insulating material

The committee has decided that the contents of this publication will remain unchanged until 2008. At this date, the publication will be

- reconfirmed;
- withdrawn;
- replaced by a revised edition, or
- amended.

ELECTRICAL INSULATING MATERIALS – THERMAL ENDURANCE PROPERTIES –

Part 5: Determination of relative thermal endurance index (RTE) of an insulating material

1 Scope

This part of IEC 60216 specifies the experimental and calculation procedures to be used for deriving the relative thermal endurance index of a material from experimental data obtained in accordance with the instructions of IEC 60216-1 and IEC 60216-2. The calculation procedures are supplementary to those of IEC 60216-3.

Guidance is also given for assessment of thermal ageing after a single fixed time and temperature, without extrapolation.

The experimental data may in principle be obtained using destructive, non-destructive or proof tests, although destructive tests have been much more extensively employed. Data obtained from non-destructive or proof tests may be "censored", in that measurement of times taken to reach the endpoint may have been terminated at some point after the median time but before all specimens have reached end-point (see 3.1 of IEC 60216-3).

Guidance is given for preliminary assignment of a material to an insulation class, based upon the thermal ageing performance.

2 Normative references

The following referenced documents are indispensable for the application 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 60216-1:2001, *Electrical insulating materials – Properties of thermal endurance – Part 1: Ageing procedures and evaluation of test results*

IEC 60216-2:1990, *Guide for the determination of thermal endurance properties of electrical insulating materials – Part 2: Choice of test criteria*

IEC 60216-3:2002, *Electrical insulating materials – Thermal endurance properties – Part 3: Instructions for calculating thermal endurance characteristics*

3 Terms, definitions, symbols, units and abbreviated terms

For the purposes of this part of IEC 60216, the following terms, definitions, symbols, units and abbreviated terms apply.