

Electrical insulating materials — Thermal endurance properties —

Part 4-1: Ageing ovens — Single-chamber ovens

The European Standard EN 60216-4-1:2006 has the status of a British Standard

ICS 17.220.99; 29.035.01

National foreword

This British Standard is the official English language version of EN 60216-4-1:2006. It is identical with IEC 60216-4-1:2006. It supersedes BS 5691-4.1:1995 which is withdrawn.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, which has the responsibility to:

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- present to the responsible international/European committee any enquiries on the interpretation, or proposals for change, and keep UK interests informed;
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Summary of pages

This document comprises a front cover, an inside front cover, the EN title page, pages 2 to 17 and a back cover.

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**Electrical insulating materials -
Thermal endurance properties
Part 4-1: Ageing ovens -
Single-chamber ovens
(IEC 60216-4-1:2006)**

Matériaux isolants électriques -
Propriétés d'endurance thermique
Partie 4-1: Etuves de vieillissement -
Etuves à une chambre
(CEI 60216-4-1:2006)

Elektroisolierstoffe -
Eigenschaften hinsichtlich
des thermischen Langzeitverhaltens
Teil 4-1: Wärmeschränke
für die Warmlagerung -
Einzelkammerwärmeschränke
(IEC 60216-4-1:2006)

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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 112/16/FDIS, future edition 4 of IEC 60216-4-1, prepared by subcommittee 15E: Methods of test, of IEC technical committee 15: Insulating materials, which has now been merged with IEC technical committee 98: Electrical insulation systems into IEC technical committee 112: Evaluation and qualification of electrical insulating materials and systems (provisional title), was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 60216-4-1 on 2006-03-01.

This European Standard supersedes HD 611.4.1 S1:1992 .

The main changes with regard to HD 611.4.1 S1:1992 is the adaptation to the technical content and the editorial form of EN 60216-4-2 and EN 60216-4-3. In addition, errors and omissions in IEC 60216-4-1:1990 have been corrected.

The following dates were fixed:

- | | | |
|--|-------|------------|
| – latest date by which the EN has to be implemented
at national level by publication of an identical
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| – latest date by which the national standards conflicting
with the EN have to be withdrawn | (dow) | 2009-03-01 |

Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 60216-4-1:2006 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following notes have to be added for the standards indicated:

IEC 60216-1	NOTE	Harmonized as EN 60216-1:2001 (not modified).
IEC 60216-3	NOTE	Harmonized as EN 60216-3:2002 (not modified).
IEC 60216-4-2	NOTE	Harmonized as EN 60216-4-2:2000 (not modified).
IEC 60216-4-3	NOTE	Harmonized as EN 60216-4-3:2000 (not modified).
IEC 60216-5	NOTE	Harmonized as EN 60216-5:2003 (not modified).
IEC 60216-6	NOTE	Harmonized as EN 60216-6:2004 (not modified).
IEC 60811-1-2	NOTE	Harmonized as EN 60811-1-2:1995 (not modified).

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ELECTRICAL INSULATING MATERIALS – THERMAL ENDURANCE PROPERTIES –

Part 4-1: Ageing ovens – Single-chamber ovens

1 Scope

This part of IEC 60216 covers minimum requirements for ventilated and electrically heated single-chamber ovens, with or without forced gas circulation, for thermal endurance evaluation of electrical insulation. It covers ovens designed to operate over all or part of the temperature range from 20 °C above ambient to 500 °C. It gives acceptance tests and in-service monitoring tests for these ageing ovens.

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.

ISO/IEC 17025:2005 *General requirements for the competence of testing and calibration laboratories*

IEC 60335 (all parts), *Household and similar electrical appliances – Safety*

3 Terms and definitions

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

3.1

rate of ventilation

N

number of air changes per hour in the exposure chamber at room temperature

3.2

exposure volume

that central part of the exposure chamber that meets the requirements for temperature fluctuation, temperature difference and temperature variation

3.3

exposure temperature

T

temperature selected for ageing test specimens to obtain data for the determination of effects of temperature

NOTE See also “global exposure temperature”.

3.4

temperature fluctuation

ΔT₁

maximum change in temperature at one point in the exposure volume over a period of time