

Standard conditions for use prior to and during the testing of solid electrical insulating materials

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EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 60212:2011 sisaldab Euroopa standardi EN 60212:2011 ingliskeelset teksti.

Standard on kinnitatud Eesti Standardikeskuse 29.07.2011 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.

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English version

Standard conditions for use prior to and during the testing of solid electrical insulating materials
(IEC 60212:2010)

Conditions normales à observer avant et pendant les essais de matériaux isolants électriques solides
(CEI 60212:2010)

Standardbedingungen für die Anwendung vor und während der Prüfung von festen Elektroisolistoffen
(IEC 60212:2010)

This European Standard was approved by CENELEC on 2011-01-19. 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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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 (112/148/CDV), future edition 3 of IEC 60212, 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 60212 on 2011-01-19.

This European Standard supersedes HD 437 S1:1984.

The significant technical changes with respect to HD 437 S1:1984 are as follows:

- the scope and normative references have been updated and terms and definitions completely reviewed;
- technical details in Table 2 have been aligned to today's usage.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN and CENELEC shall not be held responsible for identifying any or all such patent rights.

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) | 2011-10-19 |
| – latest date by which the national standards conflicting with the EN have to be withdrawn | (dow) | 2014-01-19 |

Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 60212:2010 was approved by CENELEC as a European Standard without any modification.

Annex ZA (normative)

Normative references to international publications with their corresponding European publications

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.

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

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60068-1 + corr. October + A1	1988 1988 1992	Environmental testing - Part 1: General and guidance	EN 60068-1 ¹⁾	1994
IEC 60216-4-1	-	Electrical insulating materials - Thermal endurance properties - Part 4-1: Ageing ovens - Single-chamber ovens	EN 60216-4-1	-
ISO 62	2008	Plastics - Determination of water absorption	EN ISO 62	2008

¹⁾ EN 60068-1 includes A1 to IEC 60068-1 + corr. October .

CONTENTS

FOREWORD.....	3
INTRODUCTION	5
1 Scope.....	6
2 Normative references.....	6
3 Terms and definitions.....	6
4 Temperature and humidity (or liquid immersion) recommended for preconditioning, conditioning and testing	8
5 Period of conditioning	8
6 Procedures for atmospheric preconditioning, conditioning, and testing.....	9
7 Liquid immersion, conditioning and testing	9
8 Standard reference atmosphere	10
9 Code for specifying preconditioning, conditioning and testing.....	10
10 Report.....	10
Table 1 – Codes for preconditioning, conditioning and testing	10
Table 2 – Standard atmospheric conditions for testing and conditioning	11
Table 3 – Standard liquid immersion conditions for testing and conditioning	12
Table 4 – List of preferred periods for preconditioning and conditioning	12

INTRODUCTION

Many electrical insulating materials have properties which are affected by the temperature or humidity, or both, of the atmospheres to which they are subjected. It is usually necessary, therefore, when testing these materials, to control both temperature and humidity prior to testing, as well as the conditions in which the specimens are actually tested. The selection of appropriate conditions and tests should be decided according to the materials specification and the intended application. Unless otherwise specified, specimens should be conditioned and measured in the same climate as that in which they are to be tested.

When giving results of tests on electrical insulating materials likely to be affected by those factors, it is important that the relevant conditions to which the test specimens were exposed are reported. Specifications for such materials should, therefore, identify the atmospheres to which the test specimens should be exposed before testing and the conditions under which the tests are to be made.

STANDARD CONDITIONS FOR USE PRIOR TO AND DURING THE TESTING OF SOLID ELECTRICAL INSULATING MATERIALS

1 Scope

This International Standard gives the accepted conditions of exposure time, temperature, atmospheric humidity and liquid immersion for use in testing solid electrical insulating materials. The range is sufficiently wide to enable suitable conditions to be selected so that either of the primary objects, set out below as a) and b), of conditioning can be achieved. These objectives aim to obtain greater reproducibility of test results by:

- a) partly counteracting the variations of the properties of the material due to the past history of the test specimens (often known as "normalizing", here called preconditioning), and
- b) ensuring uniformity of conditions during the testing.

This standard is not intended to be applied for determining the influence of exposure to certain temperatures and humidity or immersions in liquids, on the properties of a material. Procedures pertaining to the effect of an environment on a material are given in various parts of IEC 60068.

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 60068-1:1988, *Environmental testing – Part 1: General and guidance*
Amendment 1 (1992)

IEC 60216-4-1, *Electrical insulating materials – Thermal endurance properties – Part 4-1: Ageing ovens – Single-chamber ovens*

ISO 62:2008: *Plastics – Determination of water absorption*

3 Terms and definitions

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

3.1

insulating material

solid with negligibly low electric conductivity, used to separate conducting parts at different electrical potentials

NOTE 1 In English, the term "insulating material" is sometimes used in a broader sense to also designate insulating liquids and gases.

NOTE 2 An insulating material may be a solid, a liquid or a gas, or a mixture of these. This standard refers only to a solid insulating material.

3.2

specimen

typical sample of the insulating material under test, as described in the relevant test specification