SLOVENSKI STANDARD
SIST EN 60068-2-61:2001

01-september-2001

Environmental testing - Part 2: Test methods - Test Z/ABDM: Climatic sequence

Environmental testing -- Part 2: Test methods - Test Z/ABDM: Climatic sequence

Umweltprüfungen -- Teil 2: Prüfverfahren - Prüfung Z/ABDM: Reihenfolge von klimatischen Prüfungen

Essais d'environnement -- Partie 2: Méthodes d'essai - Essai Z/ABDM: Séquence climatique

Ta slovenski standard je istoveten z: **EN 60068-2-61:1993**

ICS:

19.040	Preskušanje v zvezi z okoljem	Environmental testing

SIST EN 60068-2-61:2001 **en**

EUROPEAN STANDARD

NORME EUROPEENNE

EUROPÄISCHE NORM

EN 60068-2-61

October 1993

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Descriptors: Electricity, component, equipment, climatic test, composite test, dry heat, damp heat, low air pressure, procedures, components specification writing, equipment specification writing

ENGLISH VERSION

Environmental testing
Part 2: Test methods
Test Z/ABDM: Climatic sequence
(IEC 68-2-61:1991)

Essais d'environnement
Partie 2: Méthodes d'essai
Essai Z/ABDM: Séquence climatique
(CEI 68-2-61:1991)

Umweltprüfungen
Teil 2: Prüfverfahren
Prüfung Z/ABDM: Reihenfolge von klimatischen Prüfungen
(IEC 68-2-61:1991)

This European Standard was approved by CENELEC on 1993-09-22. 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, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, 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

At the request of the CENELEC Reporting Secretariat SR 50, the International Standard IEC 68-2-61:1991 was submitted to the CENELEC Unique Acceptance Procedure (UAP) for acceptance as a European Standard.

The text of the International Standard was approved by CENELEC as EN 60068-2-61 on 22 September 1993.

The following dates were fixed:

- latest date of publication of an identical national standard	(dop)	1994-09-01
- latest date of withdrawal of conflicting national standards	(dow)	1994-09-01

Annexes designated "normative" are part of the body of the standard. Annexes designated "informative" are given only for information. In this standard, annexes A and B are informative and annex ZA is normative.

ENDORSEMENT NOTICE

The text of the International Standard IEC 68-2-61:1991 was approved by CENELEC as a European Standard without any modification.

ANNEX ZA (normative)

OTHER INTERNATIONAL PUBLICATIONS QUOTED IN THIS STANDARD WITH THE REFERENCES OF THE RELEVANT 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.

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

IEC Publication	Date	Title	EN/HD	Date
68-1	1988	Environmental testing Part 1: General and guidance	HD 323.1 S2	1988
68-2-1	1990	Part 2: Test methods - Tests A: Cold	EN 60068-2-1	1993
68-2-2 68-2-2A	1974 1976	Tests B: Dry heat First supplement	EN 60068-2-2	1993
68-2-13	1983	Test M: Low air pressure	HD 323.2.13 S1	1987
68-2-28	1980	Guidance for damp heat tests	HD 323.2.28 S1	1988
68-2-30	1980	Test Db and guidance: Damp heat, cyclic (12 + 12-hour cycle)	HD 323.2.30 S3*	1988
68-3-1 68-3-1A	1974 1978	Part 3: Background information Section One - Cold and dry heat tests First supplement	HD 323.3.1 S1	1988
721-2	series	Classification of environmental conditions - Part 2: Environmental conditions appearing in nature	HD 478.2	series
721-3	series	Part 3: Classification of groups of environmental parameters and their severities	EN 60721-3	series

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* HD 323.2.30 S3 includes A1:1985 to IEC 68-2-30

NORME INTERNATIONALE
INTERNATIONAL STANDARD

CEI
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68-2-61

Première édition
First edition
1991-06

Essais d'environnement

Deuxième partie:
Méthodes d'essai
Essai Z/ABDM: Séquence climatique

Environmental testing

Part 2:
Test methods
Test Z/ABDM: Climatic sequence

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IEC

Commission Electrotechnique Internationale
International Electrotechnical Commission
Международная Электротехническая Комиссия

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

ENVIRONMENTAL TESTING

Part 2: Test methods – Test Z/ABDM: Climatic sequence

FOREWORD

1) The formal decisions or agreements of the IEC on technical matters, prepared by Technical Committees on which all the National Committees having a special interest therein are represented, express, as nearly as possible, an international consensus of opinion on the subjects dealt with.

2) They have the form of recommendations for international use and they are accepted by the National Committees in that sense.

3) In order to promote international unification, the IEC expresses the wish that all National Committees should adopt the text of the IEC recommendation for their national rules in so far as national conditions will permit. Any divergence between the IEC recommendation and the corresponding national rules should, as far as possible, be clearly indicated in the latter.

This International Standard IEC 68-2-61 has been prepared by IEC Technical Committee No. 50: Environmental testing.

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

Six Months' Rule	Report on Voting
50(CO)224	50(CO)230

Full information on the voting for the approval of this standard can be found in the Voting Report indicated in the above table.

Annexes A and B are for information only.

INTRODUCTION

The value of a sequence of climatic tests, particularly for the testing of components, has been witnessed by the inclusion of a "climatic sequence" in IEC 68-1 (see clause 7 with guidance in annex B).

With the increasing importance of the IEC Quality Assessment System for Electronic Components (IECQ) it has become necessary to define the test sequence more precisely than could be done in clause 7 of IEC 68-1 with the object of providing for satisfactory reproducibility of the test.

This International Standard describes in detail a composite test specifying a "climatic sequence" for specimens of products, primarily components, that is based on clause 7 of IEC 68-1, and it includes guidance in informative annexes for specification writers and those performing the test.

NOTE - Test Z/ABDM is a "composite test" as defined in IEC 68-1 rather than a "sequence" as defined in the same standard. Because of the well-established use of "sequence" in references to clause 7 of IEC 68-1 it has been decided that "sequence" should continue to be used in referring to the operations in this composite test.

ENVIRONMENTAL TESTING

Part 2: Test methods – Test Z/ABDM: Climatic sequence

1 Scope

This International Standard provides standard composite test methods for determining the suitability of a specimen when subjected to environmental conditions consisting of a sequence of temperature, humidity and, where required, low air pressure environmental stresses.

The order of application of the stresses and conditions for the change from one step to the next have been chosen to accelerate and amplify degradation mechanisms of the same type as those observed under natural climatic conditions.

NOTE - Environmental conditions occurring in nature are classified in IEC 721-2 and IEC 721-3.

This standard may be applied to other electrotechnical products when the degradation mechanisms are the same and the specified requirements for testing can be satisfied. In other cases, it may form a basis for the writing of a similar test.

In this test, specimens are exposed to environmental tests in a standard order and categorized according to the basic code defined in Appendix A of IEC 68-1 except that the third group of digits is used as an indication of the number of cycles in Step 5 of the damp heat cyclic Test Db according to clause 6 in IEC 68-2-30. In the climatic categories -/-/56, 40/-/-, etc., in this standard the dashes may be replaced by any of the standard values appropriate to the space as in the following examples: 55/100/56, 25/085/56, 40/085/21. Where any modification is necessary, the relevant specification shall provide the necessary information for each step in the selected method (see clause 8).

This test is frequently specified to follow other tests involving mechanical stress, for example tests for robustness of terminations, solderability, shock and vibration, as a means of determining whether the sealing of the specimen has been damaged.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.