BS EN IEC 60068-2-38:2021

BSI Standards Publication

Environmental testing

Part 2-38: Tests — Test Z/AD: Composite temperature/humidity cyclic test

bsi.

National foreword

This British Standard is the UK implementation of EN IEC 60068-2-38:2021. It is identical to IEC 60068-2-38:2021. It supersedes BS EN 60068-2-38:2009, which will be withdrawn on 29 April 2024.

The UK participation in its preparation was entrusted to Technical Committee GEL/104, Environmental conditions, classification and testing.

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

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Published by BSI Standards Limited 2021

ISBN 978 0 539 04323 5

ICS 19.040

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This British Standard was published under the authority of the Standards Policy and Strategy Committee on 31 May 2021.

Amendments/corrigenda issued since publication

Date	Text affected

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN IEC 60068-2-38

April 2021

ICS 19.040

Supersedes EN 60068-2-38:2009 and all of its amendments and corrigenda (if any)

English Version

Environmental testing - Part 2-38: Tests - Test Z/AD: Composite temperature/humidity cyclic test (IEC 60068-2-38:2021)

Essais d'environnement - Partie 2-38: Essais - Essai Z/AD: Essai cyclique composite de température et d'humidité (IEC 60068-2-38:2021)

Umgebungseinflüsse - Teil 2-38: Prüfverfahren - Prüfung Z/AD: Zusammengesetzte Prüfung, Temperatur/Feuchte, zyklisch (IEC 60068-2-38:2021)

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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

European foreword

The text of document 104/891/FDIS, future edition 3 of IEC 60068-2-38, prepared by IEC/TC 104 "Environmental conditions, classification and methods of test" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 60068-2-38:2021.

The following dates are fixed:

- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2022-01-29
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2024-04-29

This document supersedes EN 60068-2-38:2009 and all of its amendments and corrigenda (if any).

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Endorsement notice

The text of the International Standard IEC 60068-2-38:2021 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 60068-2-30 NOTE Harmonized as EN 60068-2-30

IEC 60068-2-78 NOTE Harmonized as EN 60068-2-78

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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ENVIRONMENTAL TESTING –

Part 2-38: Tests – Test Z/AD: Composite temperature/humidity cyclic test

FOREWORD

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IEC 60068-2-38 has been prepared by IEC technical committee 104: Environmental conditions, classification and methods of test. It is an International Standard.

This third edition cancels and replaces the second edition, published in 2009. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

a) the figures have been updated;
b) changes to the wording has been made for clarification purposes.

The text of this International Standard is based on the following documents:

Draft	Report on voting
104/891/FDIS	104/896/RVD

Full information on the voting for its approval can be found in the report on voting indicated in the above table.

The language used for the development of this International Standard is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/standardsdev/publications.

A list of all parts in the IEC 60068 series, published under the general title *Environmental testing,* can be found on the IEC website.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under "http://webstore.iec.ch" in the data related to the specific document. At this date, the document will be

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

ENVIRONMENTAL TESTING –

Part 2-38: Tests – Test Z/AD: Composite temperature/humidity cyclic test

1 Scope

This part of IEC 60068 specifies a composite test procedure, primarily intended for component type specimens, to determine, in an accelerated manner, the resistance of specimens to the deteriorative effects of high temperature/humidity and cold conditions.

This test standard does not apply to specimens that are energized during the complete test. Specimens can be energized during the constant phases of the tests. Measurements on energized specimens are typically carried out during constant phases of the test unless specified otherwise.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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, *Environmental testing – Part 1: General and guidance*

IEC 60068-2-67, *Environmental testing – Part 2-67: Tests – Test Cy: Damp heat, steady state, accelerated test primarily intended for components*

3 Terms and definitions

No terms and definitions are listed in this document.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at http://www.electropedia.org/
- ISO online browsing platform: available at http://www.iso.org/obp

4 General

4.1 Description of the test

Test Z/AD is a cyclic temperature/humidity test which is designed to reveal defects in test specimens caused by "breathing" as distinct from the absorption of moisture.

This process can be initiated by the forming of condensation on the specimen's surface. As the temperature on parts or the whole of the specimen's surface might be lower than the corresponding dew point at the humidity value, water can accumulate in small cracks or gaps on the specimen's surface.