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INTERNATIONAL STANDARD



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

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

ENVIRONMENTAL TESTING –

Part 2-38: Tests –

Test Z/AD: Composite temperature/humidity cyclic test

FOREWORD

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This redline version of the official IEC Standard allows the user to identify the changes made to the previous edition IEC 60068-2-38:2009. A vertical bar appears in the margin wherever a change has been made. Additions are in green text, deletions are in strikethrough red text.

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.

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ENVIRONMENTAL TESTING –

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

1 Scope

This part of IEC 60068 ~~provides~~ 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 60068-2-30, *Environmental testing – Part 2-30: Tests – Test Db: Damp heat, cyclic (12 h + 12 h cycle)*~~

~~IEC 60068-2-78, *Environmental testing – Part 2-78: Tests – Test Cab: Damp heat, steady state*~~

~~IEC Guide 104, *The preparation of safety publications and the use of basic safety publications and group safety publications*~~

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

INTERNATIONAL STANDARD

NORME INTERNATIONALE

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

**Essais d'environnement –
Partie 2-38: Essais – Essai Z/AD: Essai cyclique composite de température
et d'humidité**

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

ENVIRONMENTAL TESTING –

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

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ENVIRONMENTAL TESTING –

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

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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*

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COMMISSION ÉLECTROTECHNIQUE INTERNATIONALE

ESSAIS D'ENVIRONNEMENT –

Partie 2-38: Essais –

Essai Z/AD: Essai cyclique composite de température et d'humidité

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Cette troisième édition annule et remplace la deuxième édition parue en 2009. Cette édition constitue une révision technique.

Cette édition inclut les modifications techniques majeures suivantes par rapport à l'édition précédente:

- a) les figures ont été mises à jour;
- b) la formulation a été modifiée à des fins de clarification.

Le texte de cette Norme internationale est issu des documents suivants:

Projet	Rapport de vote
104/891/FDIS	104/896/RVD

Le rapport de vote indiqué dans le tableau ci-dessus donne toute information sur le vote ayant abouti à l'approbation de cette norme.

La langue employée pour l'élaboration de cette Norme internationale est l'anglais.

Le présent document a été rédigé selon les Directives ISO/IEC, Partie 2, il a été développé selon les Directives ISO/IEC, Partie 1 et les Directives ISO/IEC, Supplément IEC, disponibles sous www.iec.ch/members_experts/refdocs. Les principaux types de documents développés par l'IEC sont décrits plus en détail sous www.iec.ch/standardsdev/publications.

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ESSAIS D'ENVIRONNEMENT –

Partie 2-38: Essais –

Essai Z/AD: Essai cyclique composite de température et d'humidité

1 Domaine d'application

La présente partie de l'IEC 60068 spécifie une procédure d'essai composite, essentiellement destinée aux spécimens de type composant, dans le but de déterminer d'une manière accélérée la résistance des spécimens aux effets destructifs dus à des séjours dans des conditions de température/d'humidité élevées, alternées avec des conditions de froid.

La présente norme d'essai ne s'applique pas aux spécimens qui sont mis sous tension durant toute la durée de l'essai. Les spécimens peuvent être mis sous tension durant les phases constantes des essais. Les mesures réalisées sur des spécimens sous tension ont généralement lieu durant les phases constantes de l'essai, sauf spécification contraire.

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IEC 60068-1, *Essais d'environnement – Partie 1: Généralités et lignes directrices*

IEC 60068-2-67, *Essais d'environnement – Partie 2-67: Essais – Essai Cy: Essai continu de chaleur humide, essai accéléré applicable en premier lieu aux composants*