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Standards

Irish Standard  
I.S. EN 60068-2-78:2013

# Environmental testing -- Part 2-78: Tests - Test Cab: Damp heat, steady state (IEC 60068-2-78:2012 (EQV))

## I.S. EN 60068-2-78:2013

*Incorporating amendments/corrigenda issued since publication:*

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I.S. xxx: Irish Standard – national specification based on the consensus of an expert panel and subject to public consultation.

S.R. xxx: Standard Recommendation - recommendation based on the consensus of an expert panel and subject to public consultation.

SWiFT xxx: A rapidly developed recommendatory document based on the consensus of the participants of an NSAI workshop.

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EUROPEAN STANDARD  
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**EN 60068-2-78**

June 2013

ICS 19.040; 29.020

Supersedes EN 60068-2-78:2001

English version

**Environmental testing -  
Part 2-78: Tests -  
Test Cab: Damp heat, steady state  
(IEC 60068-2-78:2012)**

Essais d'environnement -  
Partie 2-78: Essais -  
Essai Cab: Chaleur humide, essai continu  
(CEI 60068-2-78:2012)

Umgebungseinflüsse -  
Teil 2-78: Prüfverfahren -  
Prüfung Cab: Feuchte Wärme, konstant  
(IEC 60068-2-78:2012)

This European Standard was approved by CENELEC on 2012-12-03. 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 CEN-CENELEC Management Centre 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 CEN-CENELEC Management Centre has the same status as the official versions.

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**CENELEC**

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

**Management Centre: Avenue Marnix 17, B - 1000 Brussels**

## **Foreword**

The text of document 104/582/FDIS, future edition 2 of IEC 60068-2-78, 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 60068-2-78:2013.

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) 2013-12-14
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2015-12-03

This document supersedes EN 60068-2-78:2001.

EN 60068-2-78:2013 includes the following significant technical changes with respect to EN 60068-2-78:2001:

The test chamber from EN 60068-3-6 has been introduced.

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

## **Endorsement notice**

The text of the International Standard IEC 60068-2-78:2012 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 documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. 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	-	Environmental testing - Part 1: General and guidance	EN 60068-1	-
IEC 60068-3-6	-	Environmental testing - Part 3-6: Supporting documentation and guidance - Confirmation of the performance of temperature/humidity chambers	EN 60068-3-6	-
IEC Guide 104	-	The preparation of safety publications and the use of basic safety publications and group safety publications	-	-

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

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### **ENVIRONMENTAL TESTING –**

#### **Part 2-78: Tests – Test Cab: Damp heat, steady state**

#### **FOREWORD**

- 1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as “IEC Publication(s)”). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
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International Standard IEC 60068-2-78 has been prepared by technical committee 104: Environmental conditions, classification, and methods of test.

This second edition cancels and replaced the first edition, published in 2001 and constitutes a technical revision.

This edition includes editorial and format changes with respect to the previous edition:

- The test chamber from IEC 60068-3-6 has been introduced.



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

FDIS	Report on voting
104/582/FDIS	104/588/RVD

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

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

It has the status of a basic safety publication in accordance with IEC Guide 104.

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

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

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

## INTRODUCTION

This part of IEC 60068 provides a test method of high humidity at constant temperature without condensation on the specimen over a prescribed period. This test is performed to evaluate the specimen as it is influenced by the absorption and diffusion of moisture and moisture vapour.

## ENVIRONMENTAL TESTING –

### Part 2-78: Tests – Test Cab: Damp heat, steady state

#### 1 Scope and object

This part of IEC 60068 establishes a test method for determining the ability of components or equipment to withstand transportation, storage and use under conditions of high humidity.

The object of this standard is to investigate the effect of high humidity at constant temperature without condensation on a specimen over a prescribed period.

It is applicable to small equipment or components as well as large equipment, and can be applied to both heat-dissipating and non-heat-dissipating specimens.

#### 2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. 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 60068-3-6, *Environmental testing – Part 3-6: Supporting documentation and guidance – Confirmation of the performance of temperature and humidity chambers*

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

#### 3 Terms and definitions

None.

#### 4 General test procedure

##### 4.1 Test chamber and measuring system

The temperature and humidity chamber shall be constructed and verified in accordance with specifications IEC 60068-3-6.

The chamber and measuring system shall be such that

- sensing devices can be located in the working space to monitor the temperature and humidity,

NOTE For heat-dissipating specimens, the temperature and humidity near the specimen may be influenced by the effect of heat dissipation from the specimen.

- condensed water is drained from the chamber and not re-used unless purified,
- no condensed water from the walls and roof of the test chamber can fall on the specimen(s),

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