BS EN 60068-2-38:2009



BSI Standards Publication

Environmental testing —

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

NO COPYING WITHOUT BSI PERMISSION EXCEPT AS PERMITTED BY COPYRIGHT LAW



raising standards worldwide[™]

This British Standard is the UK implementation of EN 60068-2-38:2009. It is identical to IEC 60068-2-38:2009. It supersedes BS EN 60068-2-38:1999 which is withdrawn.

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 secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

© BSI 2010

ISBN 978 0 580 52986 3

ICS 19.040

Compliance with a British Standard cannot confer immunity from legal obligations.

This British Standard was published under the authority of the Standards Policy and Strategy Committee on 31 January 2010

Amendments issued since publication

EUROPÄISCHE NORM

November 2009

ICS 19.040

Supersedes EN 60068-2-38:1999

English version

Environmental testing -Part 2-38: Tests -Test Z/AD: Composite temperature/humidity cyclic test (IEC 60068-2-38:2009)

Essais d'environnement -Partie 2-38: Essais -Essai Z/AD: Essai cyclique composite de température et d'humidité (CEI 60068-2-38:2009) Umgebungseinflüsse -Teil 2-38: Prüfverfahren -Prüfung Z/AD: Zusammengesetzte Prüfung, Temperatur/Feuchte, zyklisch (IEC 60068-2-38:2009)

This European Standard was approved by CENELEC on 2009-09-01. 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, Bulgaria, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

CENELEC

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

Central Secretariat: Avenue Marnix 17, B - 1000 Brussels

© 2009 CENELEC - All rights of exploitation in any form and by any means reserved worldwide for CENELEC members.

Foreword

The text of document 104/482/FDIS, future edition 2 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 was approved by CENELEC as EN 60068-2-38 on 2009-09-01.

This European Standard supersedes EN 60068-2-38:1999.

The major changes with regard to EN 60068-2-38:1999 concern the updating of the figures, changes to some of the wording and editorial corrections made for clarification.

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)	2010-06-01
-	latest date by which the national standards conflicting with the EN have to be withdrawn	(dow)	2012-09-01

Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 60068-2-38:2009 was approved by CENELEC as a European Standard without any modification.

(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.

Publication	Year	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60068-1	_1)	Environmental testing - Part 1: General and guidance	EN 60068-1	1994 ²⁾
IEC 60068-2-30	_1)	Environmental testing - Part 2-30: Tests - Test Db: Damp heat, cyclic (12 h + 12 h cycle)	EN 60068-2-30	2005 ²⁾
IEC 60068-2-78	_1)	Environmental testing - Part 2-78: Tests - Test Cab: Damp heat, steady state	EN 60068-2-78	2001 ²⁾
IEC Guide 104	_1)	The preparation of safety publications and the use of basic safety publications and group safety publications	-	-

¹⁾ Undated reference.

²⁾ Valid edition at date of issue.

CONTENTS

1	Scope5							
2	Normative references							
3	Gene	eral	Ę	5				
	3.1 Description of the test							
	3.2 Application of the test							
4	Description of test chamber							
	4.1	per for exposure to moisture6	3					
	4.2	4.2 Chamber for exposure to cold7						
5 Severities								
6	Testi	ng proc	edure	7				
	6.1	Precor	nditioning (see figure 1)	7				
	6.2	Initial	measurements	3				
	6.3	0.3 Conditioning						
	6.4	ycle12	2					
		6.4.1	Description of temperature/humidity subcycle12	2				
		6.4.2	Description of cold subcycle12					
		6.4.3	Description of 24 h cycles with no exposure to cold					
		6.4.4	Description of final cycle13					
	6.5	Final r	neasurements					
		6.5.1	At high humidity13					
		6.5.2	Immediately upon removal from the chamber13					
		6.5.3	After final drying13					
7	Information to be given in the relevant specification							
8	to be given in the test report14	ł						
Fig	ure 1	– Preco	nditioning	3				
Fig	ure 2	– Expos	sure to humidity followed by exposure to cold10)				
Fig	ure 3	– Expos	sure to humidity not followed by exposure to cold11	I				