

INTERNATIONAL STANDARD

NORME INTERNATIONALE

**Environmental testing –
Part 2-14: Tests – Test N: Change of temperature**

**Essais d'environnement –
Partie 2-14: Essais – Essai N: Variation de température**



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CONTENTS

FOREWORD.....	4
INTRODUCTION.....	6
1 Scope.....	7
2 Normative references	7
3 Terms and definitions	7
4 Symbols	8
5 General	8
5.1 Field conditions of changing temperature	8
5.2 Design of tests with temperature change.....	9
5.3 Test parameters.....	9
5.4 Purpose and choice of the tests	10
5.5 Choice of the exposure time to each conditioning temperature.....	10
5.6 Choice of the duration of the transfer time t_2	11
5.7 Applicability limits of change of temperature tests	11
6 Initial and final measurements	12
6.1 General.....	12
6.2 Initial measurements.....	12
6.3 Final measurements.....	12
7 Test Na: Rapid change of temperature	12
7.1 General description of the test	12
7.2 Testing procedure	12
7.2.1 Testing chamber.....	12
7.2.2 Mounting or supporting of the test specimen.....	15
7.2.3 Severities	15
7.2.4 Preconditioning.....	16
7.2.5 Test cycle	17
7.3 Recovery	19
8 Test Nb: Change of temperature with specified rate of change	19
8.1 General description of the test	19
8.2 Testing procedure	20
8.2.1 Testing chamber.....	20
8.2.2 Mounting or supporting structure of the test specimen	20
8.2.3 Severities	20
8.2.4 Tolerance	21
8.2.5 Preconditioning.....	22
8.3 Test cycle	22
8.4 Recovery	23
9 Test Nc: Rapid change of temperature, two-fluid-bath method	24
9.1 General description of the test	24
9.2 Testing procedure	24
9.2.1 Testing equipment	24
9.2.2 Severities	24
9.2.3 Conditioning	24
9.3 Test cycle	25
9.4 Recovery	25
10 Information to be given in the test report.....	26

Annex A (informative) Potential consequences of improper severities	27
Annex B (informative) Thermal responsiveness of different materials and geometries	28
Annex C (normative) Auxiliary table with exemplary temperature tolerances $\pm\sigma_T$ for preferred combinations of high and low conditioning temperatures and rates of temperature change (Test Nb)	29
Bibliography	35
Figure 1 – Determination of the exposure time t_1 of the specimen to each conditioning temperature	11
Figure 2 – Schematic representation of examples of thermal test cabinets and test procedure with two separate test chambers	13
Figure 3 – Schematic representation of examples of thermal test cabinets with one test chamber	14
Figure 4 – Possibility of condensation during rapid temperature change	15
Figure 5 – Possibility of condensation during transfer of the specimen	15
Figure 6 – Increased severity of Test Na	16
Figure 7 – Na test cycle, one-chamber method	17
Figure 8 – Na test cycle, two-chamber method	19
Figure 9 – Tolerance for fluctuation of test temperatures	22
Figure 10 – Nb test cycle	23
Figure 11 – Test times for intermediate operation of specimens	23
Figure 12 – Nc test cycle	25
Figure A.1 – Delayed temperature change of the specimen	27
Figure B.1 – Rate of temperature change of specimen with differing thermal responsiveness	28
Figure C.1 – Tolerance for fluctuation of test temperatures for exemplary test parameters	30
Table C.1 – Applicable temperature tolerances $\pm\sigma_T$ in K for preferred combinations of high and low conditioning temperatures and rates of temperature change dT_R	31

INTERNATIONAL ELECTROTECHNICAL COMMISSION

ENVIRONMENTAL TESTING –

Part 2-14: Tests – Test N: Change of temperature

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IEC 60068-2-14 has been prepared by IEC technical committee 104: Environmental conditions, classification and methods of test. It is an International Standard.

This seventh edition cancels and replaces the sixth 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) updating of the figures for clarification purposes;
- b) updating of specimen temperature(s) and severities as well as tolerances for change of temperature tests;
- c) revision of standardized requirements for test reports for Tests Na and Nb.

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

Draft	Report on voting
104/991/FDIS	104/1016/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/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 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.

INTRODUCTION

A change of temperature test is intended to determine the effect on the specimen of a change of temperature or a succession of changes of temperature.

It is not intended to show effects that are caused by low or high temperature exposure. For these effects, the cold test or the dry heat test, as specified in IEC 60068-2-1 and IEC 60068-2-2, should be used.

The effect of change of temperature tests is determined by

- values of high and low conditioning temperature between which the change is to be affected,
- the conditioning times for which the test specimen is kept at these temperatures,
- the rate of change between these temperatures,
- the number of cycles of conditioning,
- the amount of heat transfer into or from the specimen,
- the thermal conductivity and the materials of the specimen,
- the rate of change of the specimen's temperature on its surface (respectively in relevant positions) or in its core.

Guidance on the choice of suitable test parameters for inclusion in the detail specification is given throughout this document.

ENVIRONMENTAL TESTING –

Part 2-14: Tests – Test N: Change of temperature

1 Scope

This document provides tests with specified ambient temperature changes to analyse their impacts on specimens.

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 60068-2-1, *Environmental testing – Part 2-1: Tests – Test A: Cold*

IEC 60068-2-2, *Environmental testing – Part 2-2: Tests – Test B: Dry heat*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in IEC 60068-2-1 and IEC 60068-2-2 apply.

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

- IEC Electropedia: available at <https://www.electropedia.org/>
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