Environmental testing - Part 2-75: Tests - Test Eh: Hammer tests (IEC 60068-2-75:2014 + IEC 60068-2-75:2014/AMD1:2025)

EESTI STANDARDIMIS- JA AKREDITEERIMISKESKUS
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NATIONAL FOREWORD

See Eesti standard EVS-EN 60068-2-75:2014+A1:2025 sisaldab Euroopa standardi EN 60068-2-75:2014 ja selle muudatuse A1:2025 ingliskeelset teksti.	This Estonian standard EVS-EN 60068-2-75:2014+A1:2025 consists of the English text of the European standard EN 60068-2-75:2014 and its amendment A1:2025.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas. Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 24.10.2014, muudatus A1 19.12.2025.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation and Accreditation. Date of Availability of the European standard is 24.10.2014, for A1 19.12.2025.
Muudatusega A1 lisatud või muudetud teksti algus ja lõpp on tekstis tähistatud sümbolitega [A1] [A1]. Standard on kättesaadav Eesti Standardimis-ja Akrediteerimiskeskusest.	The start and finish of text introduced or altered by amendment A1 is indicated in the text by tags [A1] [A1]. The standard is available from the Estonian Centre for Standardisation and Accreditation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

ICS 19.040

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 60068-2-75 + A1

October 2014, December 2025

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Supersedes EN 60068-2-75:1997

English Version

Environmental testing - Part 2-75: Tests - Test Eh: Hammer tests (IEC 60068-2-75:2014 + IEC 60068-2-75:2014/AMD1:2025)

Essais d'environnement -
Partie 2-75: Essais - Test Eh: Essais au marteau
(CEI 60068-2-75:2014 + IEC 60068-2-75:2014/AMD1:2025)

Umgebungseinflüsse -
Teil: 2-75: Prüfungen - Prüfung Eh: Hammerprüfungen
(IEC 60068-2-75:2014 + IEC 60068-2-75:2014/AMD1:2025)

This European Standard was approved by CENELEC on 2014-10-08. Amendment A1 was approved by CENELEC on 2025-11-25. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard and its amendment the status of a national standard without any alteration.

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European Committee for Electrotechnical Standardization
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Ref. No. EN 60068-2-75:2014 E + EN 60068-2-75:2014/A1:2025 E

Foreword

The text of document 104/635/FDIS, future edition 2 of IEC 60068-2-75, 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 60068-2-75:2014.

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)	2015-07-08
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The text of the International Standard IEC 60068-2-75:2014 was approved by CENELEC as a European Standard without any modification.

A1 Amendment A1 European foreword

The text of document 104/1106/FDIS, future edition 2 of IEC 60068-2-75/AMD1, prepared by TC 104 "Environmental conditions, classification and methods of test" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 60068-2-75:2014/A1:2025.

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) 2026-12-31
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IEC 60068-2-75

Edition 2.1 2025-10

INTERNATIONAL STANDARD

CONSOLIDATED VERSION

Environmental testing -
Part 2-75: Tests - Test Eh: Hammer tests

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ENVIRONMENTAL TESTING –

Part 2-75: Tests – Test Eh: Hammer tests

FOREWORD

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International Standard IEC 60068-2-75 has been prepared by IEC technical committee 104: Environmental conditions, classification and methods of test.

This second edition cancels and replaces the first edition, published in 1997, and constitutes a technical revision.

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

– reconsideration of some values in Tables 1 and 2. Although some values are no longer recommended, they have been retained as alternatives for historical consistency purposes.

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

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

FDIS	Report on voting
104/635/FDIS	104/637/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.

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 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
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A1 Amendment A1 FOREWORD

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Amendment 1 to IEC 60068-2-75:2014 has been prepared by of IEC technical committee 104: Environmental conditions, classification and methods of test.

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

Draft	Report on voting
104/1106/FDIS	104/1137/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 Amendment 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/.

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– reconfirmed,
– withdrawn, or
– revised.

The content of the corrigendum 1 (2025-12) applies only to the French version. A1

INTRODUCTION

Mechanical impacts likely to stress electrotechnical equipment in service can be generated by hammers of various types. For standardization purposes, the results of such testing should not depend on the type of testing apparatus and therefore, the characteristics of the various types of test hammers described in this part of IEC 60068 are intended to be as close as practicable for the same severity level.

It is important to note that both Clause 3 and the test method selected from Clauses 4, 5, and 6 need to be complied with in order to satisfy the requirements of this International Standard.

The severity levels are, in general, taken from IEC 60721-1.

For coordination purposes, it has been necessary to change certain fundamental parameters of the previous tests Ef: Impact, pendulum hammer, and Eg: Impact, spring hammer. In all cases, both sets of parameters are shown at the appropriate places in the text. Although some values are no longer recommended, they have been retained as alternatives for historical consistency purposes. This is because they have application in certain industries as historic comparators.

ENVIRONMENTAL TESTING –

Part 2-75: Tests – Test Eh: Hammer tests

1 Scope

This part of IEC 60068 provides three standardized and coordinated test methods for determining the ability of a specimen to withstand specified severities of impact. It is used, in particular, to demonstrate an acceptable level of robustness when assessing the safety of a product and is primarily intended for the testing of electrotechnical items. It consists of the application to the specimen of a prescribed number of impacts defined by their impact energy and applied in the prescribed directions.

This part of IEC 60068 covers energy levels ranging from 0,14 J (joules) to 50 J (joules).

Three types of test apparatus are applicable to perform these tests. Annex C provides some guidance as to this aspect.

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 60721-1, *Classification of environmental conditions – Part 1: Environmental parameters and their severities*

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

IEC Guide 108, *Guidelines for ensuring the coherency of IEC publications – Application of horizontal standards*

〖A1〗 ISO 48-4*, Rubber, vulcanized or thermoplastic - Determination of hardness* 〈A1〗

ISO 1052, *Steels for general engineering purposes*

ISO 2039-2, *Plastics – Determination of hardness – Part 2: Rockwell hardness*

ISO 2041, *Vibration and shock and condition monitoring – Vocabulary*

ISO 2768-1, *General tolerances – Part 1: Tolerances for linear and angular dimensions without individual tolerances indications*

〖A1〗 ISO 6508-1, *Metallic materials - Rockwell hardness test - Part 1: Test method* 〈A1〗