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## **Miljötålighetsprovning – Del 2-75: Provningsmetoder – Eh: Slag, provning med hammare**

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

Som svensk standard gäller europastandarden EN 60068-2-75:1997. Den svenska standarden innehåller den officiella engelska språkversionen av EN 60068-2-75:1997.

### **Nationellt förord**

Europastandarden EN 60068-2-75:1997<sup>\*)</sup>

består av:

- **europastandardens ikraftsättningsdokument**, utarbetat inom CENELEC
- **IEC 60068-2-75, First edition, 1997 - Environmental testing - Part 2-75: Tests - Test Eh: Hammer tests**

utarbetad inom International Electrotechnical Commission, IEC.

Standarden ska användas tillsammans med SS-EN 60068-1.

Tidigare fastställd svensk standard SS-EN 60068, utgåva 3, 2000, gäller ej fr o m 2001-11-30.

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<sup>\*)</sup> EN 60068-2-75:1997 ikraftsattes 2001-11-30 som SS-EN 60068-2-75 genom offentliggörande, d v s utan utgivning av något svenskt dokument.

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EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

EN 60068-2-75

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ICS 19.040

Supersedes EN 60068-2-62:1995 and EN 60068-2-63:1994

Descriptors: Environmental testing, test Eh: hammer tests, provisions common to all hammer tests, test Eha: pendulum hammer, test Ehb: spring hammer, test Ehc: vertical hammer

English version

**Environmental testing**  
**Part 2: Tests - Test Eh: Hammer tests**  
**(IEC 60068-2-75:1997)**

**Essais d'environnement**  
**Partie 2: Essai Eh: Essais aux marteaux**  
**(CEI 60068-2-75:1997)**

**Umweltprüfungen**  
**Teil 2: Prüfungen**  
**Prüfung Eh: Hammerprüfungen**  
**(IEC 60068-2-75:1997)**

This European Standard was approved by CENELEC on 1997-10-01. 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, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

**CENELEC**

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

**Central Secretariat: rue de Stassart 35, B - 1050 Brussels**

### Foreword

The text of document 50A/328/FDIS, future edition 1 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 was approved by CENELEC as EN 60068-2-75 on 1997-10-01.

This European Standard supersedes EN 60068-2-62:1995 and EN 60068-2-63:1994.

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) 1998-07-01
- latest date by which the national standards conflicting  
with the EN have to be withdrawn (dow) 1998-07-01

Annexes designated "normative" are part of the body of the standard.

Annexes designated "informative" are given for information only.

In this standard, annexes A, B and ZA are normative and annexes C, D and E are informative.

Annex ZA has been added by CENELEC.

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### Endorsement notice

The text of the International Standard IEC 60068-2-75:1997 was approved by CENELEC as a European Standard without any modification.

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## Annex ZA (normative)

### Normative references to international publications with their corresponding European publications

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

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        | 1988        | Environmental testing<br>Part 1: General and guidance                                                               | EN 60068-1 <sup>1)</sup> | 1994        |
| IEC 60721-1        | 1990        | Classification of environmental conditions<br>Part 1: Environmental parameters and their severities                 |                          |             |
| + A1               | 1992        |                                                                                                                     | EN 60721-1               | 1995        |
| ISO 1052           | 1982        | Steels for general engineering purposes                                                                             | -                        | -           |
| ISO 2039-2         | 1987        | Plastics - Determination of hardness<br>Part 2: Rockwell hardness                                                   | -                        | -           |
| ISO 2041           | 1990        | Vibration and shock - Vocabulary                                                                                    | -                        | -           |
| ISO 2768-1         | 1989        | General tolerances<br>Part 1: Tolerances for linear and angular dimensions without individual tolerance indications | EN 22768-1               | 1993        |
| ISO 6508           | 1986        | Metallic materials - Hardness test Rockwell test (scales A - B - C - D - E - F - G - H - K)                         | -                        | -           |

1) EN 60068-1 includes the corrigendum October 1988 and A1:1992 to IEC 60068-1.

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## 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 co-ordination 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 and will remain valid until five years from the publication of this part of IEC 60068. At that time, the values in brackets will be removed.

## ENVIRONMENTAL TESTING –

### Part 2: Tests –

#### Test Eh: Hammer tests

## 1 Scope

This part of IEC 60068 provides three standardized and co-ordinated 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 joules (J) to 50 joules (J).

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 normative documents contain provisions which, through reference in this text, constitute provisions of this part of IEC 60068. At the time of publication, the editions indicated were valid. All normative documents are subject to revision, and parties to agreements based on this part of IEC 60068 should investigate the possibility of applying the most recent editions of the standards listed below. Members of IEC and ISO maintain registers of currently valid International Standards.

IEC 60068-1: 1988, *Environmental testing – Part 1: General and guidance*

IEC 60721-1: 1990, *Classification of environmental conditions – Part 1: Environmental parameters and their severities*  
Amendment 1, 1992

ISO 1052: 1982, *Steels for general engineering purposes*

ISO 2039-2: 1987, *Plastics – Determination of hardness – Part 2: Rockwell hardness*

ISO 2041: 1990, *Vibration and shock – Vocabulary*

ISO 2768-1: 1989, *General tolerances – Part 1: Tolerances for linear and angular dimensions without individual tolerances indicated*

ISO 6508: 1986, *Metallic materials – Hardness test – Rockwell test (scales A – B – C – D – E – F – G – H – K)*