

Safety of household and similar electrical appliances —

Part 2: Particular requirements —

Section 72: Automatic machines for floor treatment for commercial and industrial use

The European Standard EN 60335-2-72:1998, with the incorporation of amendment A1:2000, has the status of a British Standard

ICS 97.080

National foreword

This British Standard is the English language version of EN 60335-2-72:1998, including amendment A1:2000. It was derived by CENELEC from IEC 60335-2-72:1995, including amendment 1:2000.

The CENELEC common modifications have been implemented at the appropriate places in the text. The start and finish of each common modification is indicated in the text by tags **[C]** **[C]**.

The start and finish of text introduced or altered by amendment is indicated in the text by tags **[A1]** **[A1]**. Tags indicating changes to IEC text carry the number of the IEC amendment. For example, text altered by IEC amendment 1 is indicated by **[A1]** **[A1]**.

The UK participation in its preparation was entrusted by Technical Committee CPL/61, Safety of household and similar electrical appliances, to Subcommittee CPL/61/10, Floor treatment machines (industrial), which has the responsibility to:

- aid enquirers to understand the text;
- present to the responsible international/European committee any enquiries on the interpretation, or proposals for change, and keep the UK interests informed;
- monitor related international and European developments and promulgate them in the UK.

A list of organizations represented on this subcommittee can be obtained on request to its secretary.

From 1 January 1997, all IEC publications have the number 60000 added to the old number. For instance, IEC 27-1 has been renumbered as IEC 60027-1. For a period of time during the change over from one numbering system to the other, publications may contain identifiers from both systems.

Cross-references

Attention is drawn to the fact that CEN and CENELEC standards normally include an annex which lists normative references to international publications with their corresponding European publications. The British Standards which implement these international or European publications may be found in the BSI Standards Catalogue under the section entitled “International Standards Correspondence Index”, or by using the “Find” facility of the BSI Standards Electronic Catalogue.

A British Standard does not purport to include all the necessary provisions of a contract. Users of British Standards are responsible for their correct application.

Compliance with a British Standard does not of itself confer immunity from legal obligations.

Summary of pages

This document comprises a front cover, an inside front cover, pages the EN title page, pages 2 to 15 and a back cover.

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English version

Safety of household and similar electrical appliances — Part 2-72: Particular requirements for automatic machines for floor treatment for commercial and industrial use

(includes amendment A1:2000)
(IEC 60335-2-72:1995 + A1:2000, modified)

Sécurité des appareils
électrodomestiques et analogues —
Partie 2-72: Règles particulières pour les
appareils automatiques de traitement
des sols à usage industriel et commercial
(inclut l'amendement A1:2000)
(CEI 60335-2-72:1995 + A1:2000, modifiée)

Sicherheit elektrischer Geräte für den
Hausgebrauch und ähnliche Zwecke —
Teil 2-72: Besondere Anforderungen für
automatische Maschinen zur
Bodenbehandlung für gewerbliche und
industrielle Zwecke
(enthält Änderung A1:2000)
(IEC 60335-2-72:1995 + A1:2000, modifiziert)

This European Standard was approved by CENELEC on 1998-10-01. Amendment A1 was approved by CENELEC on 2000-09-01. 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, Czech Republic, 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

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Foreword

The proposal to endorse IEC 60335-2-72:1995, document CLC/TC 61 (SEC) 1053, was circulated under the enquiry procedure in January 1996. The comments were discussed during the Fehrltorf meeting in October 1997 when it was decided to submit a modified draft for EN 60335-2-72 to the formal vote.

This draft was circulated in June 1998 and was approved by CENELEC as EN 60335-2-72 on 1998-10-01.

The following dates are applicable:

- latest date by which the EN has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 1999-04-01
- date on which national standards conflicting with the EN have to be withdrawn (dow) 2002-04-01

This standard has to be used in conjunction with EN 60335-1, *Safety of household and similar electrical appliances, Part 1: General requirements*. It was established on the basis of the 1994 edition of that standard. Amendments and revisions of part 1 have also to be taken into account and the dates when such changes become applicable will be stated in the relevant amendment or revision of part 1.

This part 2 supplements or modifies the corresponding clauses of EN 60335-1, so as to convert it into the European Standard: *Safety requirements for electric automatic machines for floor treatment for commercial and industrial use*.

When a particular subclause of part 1 is not mentioned in this part 2, that subclause applies as far as is reasonable. When this standard states “addition”, “modification” or “replacement”, the relevant text of part 1 is to be adapted accordingly.

Subclauses and figures which are additional to those in part 1 are numbered starting with 101. Annexes which are additional to those in part 1 are lettered AA, BB, etc.

There are no special national conditions causing a deviation from this European Standard, other than those listed in Annex ZA to EN 60335-1.

There are no national deviations from this European Standard, other than those listed in Annex ZB to EN 60335-1.

NOTE The following print types are used:

- requirements: in roman type;
- test specifications: in italic type;
- notes: in small roman type.

Words in **bold** in the text are defined in clause 2. When a definition of part 1 concerns an adjective, the adjective and the associated noun are also in bold.

A1 Foreword to amendment A1

The text of document 61J/111/FDIS, future amendment to IEC 60335-2-72:1995 prepared by SC 61J of the IEC Technical Committee 61, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as amendment A1 to EN 60335-2-72 on 2000-09-01.

The following dates are applicable:

- latest date by which the amendment has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2001-06-01
- date on which national standards conflicting with the amendment have to be withdrawn (dow) 2003-09-01

This amendment supplements or modifies the corresponding clausings of EN 60335-2-72:1998.

There are no special national conditions causing a deviation from this amendment.

There are no national deviations from this amendment. **A1**

Contents

	Page
Foreword	2
Introduction	4
1 Scope	4
2 Definitions	4
3 General requirement	5
4 General conditions for the tests	5
5 Void	5
6 Classification	5
7 Marking and instructions	5
8 Protection against access to live parts	6
9 Starting of motor-operated appliances	6
10 Power input and current	6
11 Heating	7
12 Void	7
13 Leakage current and electric strength at operating temperature	7
14 Void	7
15 Moisture resistance	7
16 Leakage current and electric strength	7
17 Overload protection of transformers and associated circuits	7
18 Endurance	7
19 Abnormal operation	8
20 Stability and mechanical hazards	8
21 Mechanical strength	10
22 Construction	10
23 Internal wiring	11
24 Components	12
25 Supply connection and external flexible cords	12
26 Terminals for external conductors	12
27 Provisions for earthing	12
28 Screws and connections	12
29 Creepage distances, clearances and distances through insulation	12
30 Resistance to heat, fire and tracking	13
31 Resistance to rusting	13
32 Radiation, toxicity and similar hazards	13
Annex A (normative) Normative references	14
Annex AA (normative) Precast concrete flags	15
Figure 101 — Impact test apparatus	13

Introduction

In response to a European Commission mandate, this standard has been carefully examined by CENELEC TC 61 with respect to the Machinery Directive, 89/392/EEC. It was concluded that the safety of products within its scope is covered by both the Low Voltage Directive, 73/23/EEC, and the Machinery Directive in a complementary way. The principal objectives of the Low Voltage Directive and the relevant essential safety requirements of the Machinery Directive are covered by this standard.

1 Scope

This clause of part 1 is applicable except as follows:

1.1 Addition:

This standard applies to mains or battery-supplied **portable** combined machines, with or without a built-in battery charger, having a chassis with or without traction drive, intended for commercial and industrial use indoors or outdoors for dry or wet treatment of hard floors or of floors with carpeting.

NOTE 101 Mobile equipment is defined as “**portable**” by part 1.

Treatment within the meaning of this standard denotes for example:

- scrubbing;
- wet or dry pick-up;
- polishing;
- application of wax and sealing products;
- shampooing.

For machines denoted for operation or transport on public areas, additional requirements are specified by the national authorities responsible for road traffic licensing regulations.

For machines denoted to handle hazardous dust in normal use, additional requirements are considered.

NOTE 2

Addition:

This section is also applicable to appliances making use of other forms of energy for the motor; but it is necessary that their influence is taken into consideration.

NOTE 3

Addition:

This standard does not apply to:

- floor treatment machines for commercial and industrial use (IEC 335-2-67);
- spray extraction appliances for commercial and industrial use (IEC 335-2-68);
- wet and dry vacuum cleaners for commercial and industrial use (IEC 335-2-69).

2 Definitions

This clause of part 1 is applicable except as follows:

2.2.9 Replacement:

normal operation: Denotes the load corresponding to the **rated power input** or the highest obtainable load of all the particular loads of the various functions, which can be operated at the same time in accordance with the manufacturer's instructions. For machines provided with a seat or an operator platform, a mass of 75 kg secured in position at the appropriate height is used to simulate the operator in the most unfavourable position.

Operational functions denote all treatment and driving functions.

The **normal operation** related to the operational functions are specified as follows:

Scrubbing and sweeping:

The machines are operated on a surface of hydraulically pressed concrete paving slabs (see Annex AA) intermittently in accordance with the manufacturer's instructions at least 30 min switched on, a period of 5 min switched off.

An alternative is a smooth concrete area of a surface consistency comparable with hydraulically pressed concrete paving slabs.

Dry and wet pick-up:

According to IEC 335-2-69.

Polishing and dry buffing:

For polishing and buffing, spray polishing on PVC surfaces is considered to be suitable for establishing **normal operation**. The peak of input occurring during the drying process of the chemical applied to treat the surface shall not be taken as **normal operation** but shall be averaged by extending measurements over a period of at least 10 min.

Carpet shampooing:

For shampooing, the test surface consists of a carpet, in accordance with IEC 312, the carpet being fastened to the floor. The brush of the shampooing machine has, prior to testing, to be conditioned by operating it for 15 min on a clean, dry concrete surface. After running on the concrete surface the brush has to be immersed in a shampoo solution for at least 30 min.

The operation has to be carried out over a period of 10 min where the solution tank has to be filled when starting the operation.