
British Standard Specification for

Safety of household and similar electrical appliances

Part 202. Particular requirements

Section 202.7 Washing machines

Sécurité des appareils électrodomestiques et analogues

Partie 202. Règles particulières

Section 202.7 Machines à laver le linge

Sicherheit elektrischer Geräte für den Hausgebrauch und ähnliche Zwecke

Teil 202. Besondere Anforderungen

Abschnitt 202.7 Waschmaschinen

This European Standard EN 60 335-2-7 : 1990 has the status of a British Standard

Contents

	Page
National foreword	Inside front cover
Cooperating organizations	Back cover
Brief history	2
Foreword	2
Text of EN 60 335-2-7	4
National appendix NA (informative)	25
National appendix NB (informative)	32
National appendix NC (informative)	Inside back cover

National foreword

This Section of BS 3456 : Part 202 has been prepared under the direction of the Light Electrical Engineering Standards Policy Committee and is the English language version of EN 60 335-2-7, 'Safety of household and similar electrical appliances: Part 2: Particular requirements for washing machines', published by the European Committee for Electrotechnical Standardization (CENELEC). It was derived by that organization from IEC Publication 335-2-7 (1984) third edition, which has the same title as the European Standard.

The CENELEC Common Modifications have been implemented at the appropriate places in the text of IEC Publication 335-2-7 (1984) third edition, and are indicated by a side line in the margin. The foreword of IEC Publication 335-2-7 (1984) third edition and the deleted parts of the original IEC text which do not form part of the text of EN 60 335-2-7 have been quoted in national appendix NA. Annexes designated 'normative' are part of the body of the standard. Annexes designated 'informative' are given for information only. National appendices are designated 'informative'.

This Section of BS 3456 : Part 202 is to be read in conjunction with BS 3456 : Part 201 : 1990 'General requirements', which it supplements or modifies. The many references to Part 1 should be read as references to BS 3456 : Part 201, which is the English language version of EN 60 335-1 which was derived from the 1983 reprint of IEC Publication 335-1 (1976) second edition including Amendments 1, 2 and 3 to IEC 335-1.

This Section of BS 3456 : Part 202 supersedes BS 3456 : Part 102 : Section 102.7 : 1988 which is withdrawn in accordance with the CENELEC Internal Regulations.

Cross-references. The relationship between other international publications quoted in this standard and British Standards which are either identical or technically equivalent, is given in national appendix NC.

Product approval. Attention is drawn to the fact that products conforming to this British Standard may be approved by the British Electrotechnical Approvals Board for the purposes of participation in the CENELEC Certification Agreement and in the CB Scheme of the IECEE. (Details of the BEAB Approval Marks Scheme are given on the inside back cover.)

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

Amendment No. 1
published and effective from 1 April 1992
to BS 3456 : Part 202 : Section 202.7 : 1991

Specification for safety of household and similar electrical appliances
Part 202. Particular requirements
Section 202.7 Washing machines

NOTE. The English language version of European Standard EN 60335-2-7 was implemented in the United Kingdom by the publication of BS 3456 : Part 202.7 : 1991. This amendment implements amendment A1 to EN 60335-2-7.

Revised text

AMD 6900
April 1992

National foreword

In paragraph 1, line 3 after 'washing machines', insert 'including amendment A1'.
In paragraph 1, line 5 after 'edition', insert 'as amended by Amendment No. 1 : 1988'.

AMD 6900
April 1992

EN title page, brief history and foreword

Insert the attached EN title page (brief history and foreword on reverse).

AMD 6900
April 1992

Text of EN 60335-2-7

Amend the text of European Standard EN 60335-2-7 in accordance with the details given on the attached pages.

AMD 6900
April 1992

National appendix NC

Insert in correct numerical order in the list of identical or technically equivalent standards the following references:

'HD 21.5 S2 : 1981	BS 6500 : 1990 Specification for insulated flexible cords and cables
Code designation	Table 15
H03VV-F or H03VVH2-F	(Technically equivalent)
HD 243	BS 6217 : 1981 Guide to graphical symbols for use on electrical equipment
	(Identical)

UDC 621.365:64-621-83:64:614.8.004.1-777:621.396.669.8

Descriptors: Household electrical appliance, washing machine, protection against electric shock, protection against fire risk, protection against mechanical hazard

Amendment A1 to the English version of EN 60335-2-7

Safety of household and similar electrical appliances Part 2 : Particular requirements for washing machines

(Amendment 1 : 1988 to IEC 335-2-7 : 1984, modified)

Sécurité des appareils électrodomestiques
et analogues
Deuxième partie: Règles particulières pour les
machines à laver le linge

(Modification 1 : 1988 à la CEI 335-2-7 : 1984,
modifiée)

Sicherheit elektrischer Geräte für den
Hausgebrauch und ähnliche Zwecke
Teil 2: Besondere Anforderungen für
Waschmaschinen

(Änderung 1 : 1988 zu IEC 335-2-7,
modifiziert)

This Amendment A1 modifies the European Standard EN 60335-2-7 : 1990. It was approved by CENELEC on 5 March 1990. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this amendment 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 amendment 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 36, B-1050 Brussels

Brief history

The proposal to endorse amendment 1 to IEC Publication 335-2-7, documents CLC/TC 61 (SEC) 579 and 640, was circulated under the enquiry procedure in August 1987 and March 1988.

This proposal was discussed during the Neusiedl meeting in May 1988 and the Brussels meeting in November 1988 when it was decided to submit a draft for an amendment to EN 60335-2-7 to the voting procedure. This procedure started in June 1989.

The text of this draft was ratified by the CENELEC Technical Board on the 5th of March 1990.

Foreword

This amendment has been prepared by the secretariat of CENELEC Technical Committee 61.

The following dates are applicable:

- date of announcement (doa) 1990-06-01
- date of latest publication (dop) 1990-12-01
- date of withdrawal of conflicting national standards (dow) 1992-09-01

For products which have complied with EN 60335-2-7 : 1990 before 1992-09-01, as shown by the manufacturer or by a certification body, this previous standard may continue to apply for production until 1997-09-01.

This document supplements or modifies the corresponding clauses of amendment 1 : 1988 to IEC 335-2-7 : 1984, so as to convert it into amendment A1 to EN 60335-2-7 : 1990.

As a consequence of endorsing amendment 1 to IEC 335-2-7, the common modifications in EN 60335-2-7 concerning subclauses 30.2 and 30.3 are withdrawn. This procedure results in replacing these common modifications by similar IEC text.

EN 60335-2-7, including this amendment, has to be used in conjunction with EN 60335-1 : 1988, including its amendments A2 : 1988, A5 : 1989 and A6 : 1989.

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

There are no national deviations from this amendment.

Other publication quoted in this amendment:

HD 243: Graphical symbols for use on equipment (see IEC 417).

Endorsement Notice

Amendment 1 : 1988 to IEC 335-2-7 : 1984 applies, taking into account the following common modifications.

Common modifications

Prefaces Delete.

Add:

7. Marking

7.1 *Add to the requirement:*

The enclosure of magnetic valves and similar components incorporated in hoses outside the washing machine and for direct connection to the water supply mains, shall be marked with the symbol No. 5036: dangerous voltage, according to HD 243 (see IEC 417).

15. Moisture resistance

15.2 *Addition:*

Magnetic valves and similar components incorporated in hoses outside the washing machine are subjected to the immersion test. After this treatment and while still immersed, the component shall withstand an electric strength test as specified in subclause 16.4.

23. Internal wiring

Replace the text by:

This clause of Part 1 is applicable except as follows:

Additional subclause:

23.601 Internal wiring for the connection of magnetic valves and similar components incorporated in water supply hoses outside the washing machine, shall be insulated so that it is at least equivalent to light polyvinyl chloride sheathed flexible cord (code designation H03 VV-F or H03 VVH2-F).

Compliance is checked by inspection.

PREFACE

This amendment has been prepared by IEC Technical Committee No. 61: Safety of household and similar electrical appliances.

The text of this amendment is based upon the following documents:

Six Months' Rule	Report on Voting
61(CO)497	61(CO)542

Full information on the voting for the approval of this amendment can be found in the Voting Report indicated in the above table.

PREFACE

Replace the second paragraph below the table by:

This Part 2 is intended to be used in conjunction with IEC Publication 335-1. It was established on the basis of the second edition (1976) of that publication, as modified by Amendments No. 1 (1977), No. 2 (1979), No. 3 (1982), No. 4 (1984), No. 5 (1986) and No. 6 (1988). Consideration may be given to future editions of, or amendments to, IEC Publication 335-1.

Add the following to the list of notes regarding differing national practices:

- In Finland, France and Norway, the glow-wire test referred to in Appendix K is made at a temperature of 650 °C (Sub-clause 30.3).
- In Australia and U.S.A. different requirements apply (Sub-clause 30.3).

30. Resistance to heat, fire and tracking

Replace this clause by:

This clause of Part 1 is applicable except as follows:

30.4 Addition:

Washing machines provided with a programme controller or a timer are regarded as appliances liable to be operated while unattended.

Other washing machines are regarded as appliances which are operated while attended.

30.5 Addition:

Switching devices with moving contacts, other than those manually operated and those intended to operate only during abnormal operation, are considered to be subjected to extra-severe duty conditions.

Switching devices with moving contacts intended to operate only during abnormal operation and other parts of insulating materials are also considered to be subjected to extra-severe duty conditions, unless they are so enclosed or located that pollution by detergent is unlikely to occur; in such cases the requirements for severe duty conditions apply.

Amendment No. 2
published and effective from 15 October 1992
to BS 3456 : Part 202 : Section 202.7 : 1991

Specification for safety of household and similar electrical appliances
Part 202. Particular requirements
Section 202.7 Washing machines

NOTE. The English language version of European Standard EN 60335-2-7 was implemented in the United Kingdom by the publication of BS 3456 : Part 202.7 : 1991. This amendment implements amendment A2 to EN 60335-2-7. This amendment together with the European Standard EN 60335-2-7 : 1990 has the status of a British Standard.

Revised text

AMD 7312
October 1992

National foreword (as amended by Amendment No. 1)

In paragraph 1, line 3, after 'amendment A1', insert 'and amendment A2'.

In paragraph 1, line 5, after 'Amendment No. 1 : 1988', insert 'and Amendment No. 2 : 1990'.

After paragraph 6, add the following paragraphs.

'The foreword of the EN makes reference to 'date of withdrawal (dow) of conflicting national standards' as '1995-01-01'. In this case the relevant national standard is BS 3456 : Part 202 : Section 202.7 but the dow relates only to those parts of the British Standard subject to Amendment No. 2. Certificates and Marks will not be awarded after this date with respect to the British Standard not incorporating Amendment No. 2. They will be awarded with respect only to the amended British Standard. However, such Certificates and Marks already awarded with respect to the British Standard not incorporating Amendment No. 2 may continue to apply for production until 2000-01-01.

With regard to Amendment No. 1 : 1992, AMD 6900 : EN 60335-2-7/A1, the foreword of the EN makes reference to 'date of withdrawal of conflicting national standards' as '1992-09-01'. This dow relates only to those parts of BS 3456 : Part 202 : Section 202.7 subject to Amendment No. 1. Certificates and Marks will not be awarded after this date with respect to the British Standard not incorporating Amendment No. 1. They will be awarded with respect only to the amended British Standard. However, such Certificates and Marks already awarded with respect to the British Standard not incorporating Amendment No. 1 may continue to apply for production until 1997-09-01.'

AMD 7312
October 1992

EN title page and foreword

Insert the attached EN title page (foreword on reverse).

AMD 7312
October 1992

Text of EN 60335-2-7

Amend the text of European Standard EN 60335-2-7 in accordance with the details given on the attached pages.

UDC 648.23:64.06-83:614.8

Descriptors: Household electrical appliances, washing machines, safety requirements, protection against electric shock, fire protection, protection against mechanical hazard

Amendment A2 to the English version of EN 60335-2-7

Safety of household and similar electrical appliances Part 2: Particular requirements for washing machines

(Amendment No. 2:1990 to IEC 335-2-7:1984, modified)

Sécurité des appareils électrodomestiques
et analogues
Deuxième partie: Règles particulières pour
les machines à laver le linge
(Modification n°. 2: 1990 à la
CEI 335-2-7:1984, modifiée)

Sicherheit elektrischer Geräte für den
Hausgebrauch und ähnliche Zwecke
Teil 2: Besondere Anforderungen für
Waschmaschinen
(Änderung Nr. 2:1990 zu
IEC 335-2-7:1984, modifiziert)

This amendment A2 modifies the European Standard EN 60335-2-7:1990. It was approved by CENELEC on 24 March 1992. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this amendment 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 amendment 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 proposal to endorse amendment No. 2:1990 to IEC 335-2-7:1984 was discussed during the Athens meeting in November 1990, when it was decided to submit a draft for an amendment to EN 60335-2-7 to the voting procedure.

This draft was circulated as prAB in October 1991 and was ratified by CENELEC as amendment A2 on the 24th March 1992.

This amendment has been prepared by the secretariat of CENELEC technical committee TC 61.

The following dates are applicable:

- latest date of publication
of an identical national standard (dop) 1993-01-01
- date of withdrawal of conflicting
national standards (dow) 1995-01-01

For products which have complied with EN 60335-2-7:1989, including its amendment A1:1990, before 1995-01-01, as shown by the manufacturer or by a certification body, this previous standard may continue to apply for production until 2000-01-01.

This document supplements or modifies the corresponding clauses of amendment No. 2:1990 to IEC 335-2-7:1984, so as to convert it into amendment A2 to EN 60335-2-7:1990.

As a consequence of endorsing amendment 2 to IEC 335-2-7, the common modifications in EN 60335-2-7 concerning subclause 22.11 (i.e. the last five paragraphs, starting with 'Drops of liquid...') and annex ZAA are withdrawn. This procedure results in replacing these common modifications by similar IEC text.

EN 60335-2-7:1990, including this amendment, has to be used in conjunction with EN 60335-1:1988, including its amendments A2:1988, A5:1989, A6:1989 and A51:1991.

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

There are no national deviations from this amendment.

NOTE. The UDC and descriptors of this amendment replace the ones given for EN 60335-2-7:1990.

Endorsement Notice

The text of amendment 2:1990 to the International Standard IEC 335-2-7:1984 was approved by CENELEC as an amendment to the European Standard with agreed common modifications as given below.

Common modifications

Preface *Delete*

Contents *Add:*

APPENDIX CC — Ageing test for elastomeric parts.

Appendix CC

3. Test liquid

Replace 'light' by 'sunlight' in the first note.

PREFACE

This amendment has been prepared by IEC Technical Committee No. 61: Safety of household and similar electrical appliances.

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

Six Months' Rule	Report on Voting
61(C0)567	61(C0)609

Full information on the voting for the approval of this amendment can be found in the Voting Report indicated in the above table.

Page 7

Add the following to the list of notes regarding differing national practices:

- In the U.S.A., the tests are different (subclause 22.11 and Appendices BB and CC).

Page 33

22. Construction

Add.

22.11 Addition:

Compliance is also checked by the following:

Drops of liquid are applied by means of a syringe to those parts inside the washing machine where leakage could occur and affect the electrical insulation.

The liquid is composed of 5 g of the detergent specified in Appendix BB in one litre of distilled water.

The washing machine is in operation or at rest, whichever is the more unfavourable.

After this test, inspection shall show that there is no trace of liquid or detergent on windings or insulation where tracking could occur.

NOTES

1 Examples of parts where leakage could occur are couplings, seals and hoses.

2 Parts which withstand the ageing test specified in Appendix CC are not considered to be parts where leakage could occur.
