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Safety of household and similar electrical appliances –

Part 2-7: Particular requirements for washing machines

Sécurité des appareils électrodomestiques et analogues –

*Partie 2-7.
Règles particulières pour les machines à laver le linge*

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International Electrotechnical Commission
Telefax: +41 22 919 0300

3, rue de Varembé Geneva, Switzerland
e-mail: inmail@iec.ch IEC web site <http://www.iec.ch>



Commission Electrotechnique Internationale
International Electrotechnical Commission
Международная Электротехническая Комиссия

CONTENTS

	Page
FOREWORD	3
Clause	
1 Scope	5
2 Definitions	6
3 General requirement	6
4 General conditions for the tests	6
5 Void	7
6 Classification	7
7 Marking and instructions	7
8 Protection against access to live parts	8
9 Starting of motor-operated appliances	8
10 Power input and current	8
11 Heating	8
12 Void	10
13 Leakage current and electric strength at operating temperature	10
14 Void	10
15 Moisture resistance	10
16 Leakage current and electric strength	11
17 Overload protection of transformers and associated circuits	12
18 Endurance	12
19 Abnormal operation	12
20 Stability and mechanical hazards	13
21 Mechanical strength	14
22 Construction	14
23 Internal wiring	15
24 Components	15
25 Supply connection and external flexible cords	16
26 Terminals for external conductors	16
27 Provision for earthing	16
28 Screws and connections	16
29 Creepage distances, clearances and distances through insulation	16
30 Resistance to heat, fire and tracking	16
31 Resistance to rusting	16
32 Radiation, toxicity and similar hazards	16
Annex A Normative references	17
Annex AA (normative) Detergent (extract from IEC 60456)	18
Annex BB (normative) Ageing test for elastomeric parts	19

INTERNATIONAL ELECTROTECHNICAL COMMISSION

SAFETY OF HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES –**Part 2-7: Particular requirements for washing machines**

FOREWORD

- 1) The IEC (International Electrotechnical Commission) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of the IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, the IEC publishes International Standards. Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. The IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
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International Standard IEC 60335-2-7 has been prepared by IEC technical committee 61: Safety of household and similar electrical appliances.

This fifth edition cancels and replaces the fourth edition published in 1993, amendment 1 (1998) and amendment 2 (1999). This fifth edition constitutes a technical revision.

The text of this standard is based on the fourth edition, amendments 1 and 2 and the following documents:

FDIS	Report on voting
61/1644/FDIS	61/1740/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 part 2 is intended to be used in conjunction with the latest edition of IEC 60335-1 and its amendments. It was established on the basis of the third edition (1991) of that standard.

This part 2 supplements or modifies the corresponding clauses of IEC 60335-1 so as to convert it into the IEC standard: Safety requirements for electric washing machines.

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

NOTE 1 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.

NOTE 2 Subclauses which are additional to those in part 1 are numbered starting from 101. Annexes which are additional to those in part 1 are lettered AA, BB, etc.

The following additional differences exist in some countries:

- 2.2.9: Different size cloths are used. The initial water temperature for machines without heating elements and without a wringer is 71 °C (USA).
- 6.1: Class 01 appliances are permitted (China and Japan).
- 6.2: IPX0 appliances are permitted (Canada and USA).
- 11.7: The test durations are different (USA).
- 15.101: The test is carried out differently (USA).
- 19.7: Appliances without a programmer are operated until steady conditions are established (USA).
- 19.101: A redundant set of contacts is not required as shown in note 2. Operation without water as specified in note 4 is not considered an abnormal condition (USA).
- 22.6: A different test is made (USA).

The test is carried out at twice the permissible inlet pressure or 2,0 MPa, whichever is greater (Norway).

The test is not conducted (USA).

- Annex AA: A different detergent is used (USA).
- Annex BB: Other tests are made on elastomeric parts (USA).

A bilingual version of this standard may be issued at a later date.

SAFETY OF HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES –

Part 2-7: Particular requirements for washing machines

1 Scope

This clause of part 1 is replaced by:

This standard deals with the safety of electric washing machines for household and similar purposes, intended for washing clothes and textiles, their **rated voltage** being not more than 250 V for single-phase appliances and 480 V for other appliances.

NOTE 1 Washing machines may incorporate means for heating water, water extraction and drying.

NOTE 2 Washing machines having a spin extraction function also have to comply with the relevant requirements of IEC 60335-2-4.

Washing machines having a drying function also have to comply with the relevant requirements of IEC 60335-2-11.

NOTE 3 Washing machines supplied with electricity together with other forms of energy are also within the scope of this standard.

Appliances not intended for normal household use but which nevertheless may be a source of danger to the public, such as appliances intended to be used by laymen in shops, in light industry and on farms, are within the scope of this standard.

NOTE 4 Examples of such appliances are washing machines for communal use in blocks of flats or in launderettes.

So far as is practicable, this standard deals with the common hazards presented by appliances which are encountered by all persons in and around the home.

This standard does not in general take into account

- the use of appliances by young children or infirm persons without supervision;
- playing with the appliance by young children.

NOTE 5 Attention is drawn to the fact that:

- for appliances intended to be used in vehicles or on board ships or aircraft, additional requirements may be necessary;
- for appliances intended to be used in tropical countries special requirements may be necessary;
- in many countries additional requirements are specified by the national health authorities, the national authorities responsible for the protection of labour, the national water supply authorities and similar authorities.

NOTE 6 This standard does not apply to:

- appliances designed exclusively for industrial purposes;
- appliances intended to be used in locations where special conditions prevail, such as the presence of a corrosive or explosive atmosphere (dust, vapour or gas).

2 Definitions

This clause of part 1 is applicable except as follows:

2.2.9 Replacement:

normal operation: Appliances are operated filled with a quantity of cloth, having a mass in the dry condition equal to the maximum mass specified in the instructions for use, and with the maximum quantity of water for which they are designed. However, if the power input or current is higher when only 50 % of the cloth is used, the appliance is operated with this load instead.

The temperature of the water is:

- 65 °C ± 5 °C for appliances without heating elements;
- 15 °C ± 5 °C for other appliances.

If the appliance does not incorporate a programmer, the water is heated to 90 °C ± 5 °C or lower if steady conditions are established, before starting the first washing period.

The cloth is pre-washed double-hemmed cotton sheets having dimensions of approximately 70 cm × 70 cm and a mass between 140 g/m² and 175 g/m² in the dry condition.

NOTE If the cloth in washing machines of the continuously rotating impeller type does not move properly during operation, its quantity is reduced until the maximum motor power input is attained.