INTERNATIONAL STANDARD



Second edition 2002-10

Household and similar electrical appliances -Safety -Part 2-74: Particular requirements for portable immersion heaters Appareils électrodomestiques et analogues -Sécurité -Partie 2-74: Règles particulières pour les thermoplongeurs mobiles



Reference number IEC 60335-2-74:2002(E)

Publication numbering

As from 1 January 1997 all IEC publications are issued with a designation in the 60000 series. For example, IEC 34-1 is now referred to as IEC 60034-1.

Consolidated editions

The IEC is now publishing consolidated versions of its publications. For example, edition numbers 1.0, 1.1 and 1.2 refer, respectively, to the base publication, the base publication incorporating amendment 1 and the base publication incorporating amendments 1 and 2.

Further information on IEC publications

The technical content of IEC publications is kept under constant review by the IEC, thus ensuring that the content reflects current technology. Information relating to this publication, including its validity, is available in the IEC catalogue of publications (see below) in addition to new editions, amendments and corrigenda. Information on the subjects under consideration and work in progress undertaken by the technical committee which has prepared this publication, as well as the list of publications issued, is also available from the following:

- IEC Web Site (<u>www.iec.ch</u>)
- Catalogue of IEC publications

The on-line catalogue on the IEC web site (<u>http://www.iec.ch/searchpub/cur_fut.htm</u>) enables you to search by a variety of criteria including text searches, technical committees and date of publication. On-line information is also available on recently issued publications, withdrawn and replaced publications, as well as corrigenda.

IEC Just Published

This summary of recently issued publications (<u>http://www.iec.ch/online_news/justpub/jp_entry.htm</u>) is also available by email. Please contact the Customer Service Centre (see below) for further information.

Customer Service Centre

If you have any questions regarding this publication or need further assistance, standards ten a please contact the Customer Service Centre:

Email: <u>custserv@lec.ch</u> Tel: +41 22 919 02 11 Fax 41 22 919 03 00

INTERNATIONAL STANDARD



Second edition 2002-10

Household and similar electrical appliances -Safety -Part 2-74: Particular requirements for portable immersion heaters Appareils électrodomestiques et analogues – Sécurité -Partie 2-74: Règles particulières pour les thermoplongeurs mobiles

© IEC 2002 — Copyright - all rights reserved

No part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from the publisher.

International Electrotechnical Commission, 3, rue de Varembé, PO Box 131, CH-1211 Geneva 20, Switzerland Telephone: +41 22 919 02 11 Telefax: +41 22 919 03 00 E-mail: inmail@iec.ch Web: www.iec.ch



Commission Electrotechnique Internationale International Electrotechnical Commission Международная Электротехническая Комиссия



For price, see current catalogue

L

CONTENTS

FO	REWORD	3
INT	RODUCTION	5
1	Scope	
2	Normative references	
3	Definitions	
4	General requirement	7
5	General conditions for the tests	7
6		7
7	Marking and instructions	7
8	Protection against access to live parts	7
9	Starting of motor-operated appliances	7
10	Power input and current	8
11	Heating	8
12	Void	8
13	Leakage current and electric strength at operating temperature	8
14	Transient overvoltages	8
15	Moisture resistance	8
16	Leakage current and electric strength	
17	Overload protection of transformers and associated circuits	8
18	Endurance	
19	Abnormal operation	
20	Stability and mechanical hazards	
21	Mechanical strength	
22	Construction	
23	Internal wiring	
24	Components	
25	Supply connection and external flexible cords	
25	Terminals for external conductors	
20	Provision for earthing	
	Screws and connections	
28		-
29	Clearances, creepage distances and solid insulation	
30	Resistance to heat and fire	
31	Resistance to rusting	
32	Radiation, toxicity and similar hazards	10
An	nexes	11
D:F	liegraphy	
ыŋ	liography	11

INTERNATIONAL ELECTROTECHNICAL COMMISSION

HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES – SAFETY –

Part 2-74: Particular requirements for portable immersion heaters

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.
- 2) The formal decisions or agreements of the IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested National Committees.
- 3) The documents produced have the form of recommendations for international use and are published in the form of standards, technical specifications, technical reports or guides and they are accepted by the National Committees in that sense.
- 4) In order to promote international unification, IEC National Committees undertake to apply IEC International Standards transparently to the maximum extent possible in their national and regional standards. Any divergence between the IEC Standard and the corresponding national or regional standard shall be clearly indicated in the latter.
- 5) The IEC provides no marking procedure to indicate its approval and cannot be rendered responsible for any equipment declared to be in conformity with one of its standards.
- 6) Attention is drawn to the possibility that some of the elements of this International Standard may be the subject of patent rights. The IEC shall not be held responsible for identifying any or all such patent rights.
- ttps://This part of International Standard NEC 60335 has been prepared by IEC technical committee 4-2002 61: Safety of household and similar electrical appliances.

This second edition cancels and replaces the first edition published in 1994. It constitutes a technical revision.

The text of this part of IEC 60335 is based on the following documents:

	FDIS	Report on voting
~	61/2177/FDIS	61/2258/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 to be used in conjunction with the latest edition of IEC 60335-1 and its amendments. It was established on the basis of the fourth edition (2001) of that standard.

NOTE 1 When "Part 1" is mentioned in this standard, it refers to IEC 60335-1.

This part 2 supplements or modifies the corresponding clauses in IEC 60335-1, so as to convert that publication into the IEC standard: Safety requirements for portable electric immersion heaters.

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 in Part 1 is to be adapted accordingly.

NOTE 2 The following numbering system is used:

- subclauses, tables and figures that are numbered starting from 101 are additional to those in Part 1;
- unless notes are in a new subclause or involve notes in Part 1, they are numbered starting from 101, including those in a replaced clause or subclause;
- additional annexes are lettered AA, BB, etc.

NOTE 3 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 3. When a definition concerns an adjective, the adjective and the associated noun are also in bold.

The committee has decided that the contents of this publication will remain unchanged until 2004. At this date, the publication will be

- reconfirmed;
- withdrawn;
- replaced by a revised edition, or
- amended.

The following differences exist in the countries indicated below.

– 19.2: The test is carried out with the appliance suspended by its supply cord (Poland).

Clause 21: The additional test is only carried out on appliances with a non-metallic enclosure (USA).
24.101: This requirement is not applicable (USA).

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