Majapidamis- ja muude taoliste elektriseadmete ohutus. Osa 2-37: Erinõuded kaubanduslikele elektrifritüüridele

Safety of household and similar electrical appliances - Part 2-37: Particular requirements for commercial electric deep fat fryers



FESTI STANDARDI FESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 60335-2-37:2001 sisaldab Euroopa standardi EN 60335-2-37:2000 ingliskeelset teksti.

Standard on kinnitatud Eesti Standardikeskuse 19.06.2001 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.

Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuapäev on 29.05.2000.

Standard on kättesaadav Eesti standardiorganisatsioonist.

This Estonian standard EVS-EN 60335-2-37:2001 consists of the English text of the European standard EN 60335-2-37:2000.

This standard is ratified with the order of Estonian Centre for Standardisation dated 19.06.2001 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.

Date of Availability of the European standard text 29.05.2000.

The standard is available from Estonian standardisation organisation.

ICS 97.040.50

Standardite reprodutseerimis- ja levitamisõigus kuulub Eesti Standardikeskusele

Andmete paljundamine, taastekitamine, kopeerimine, salvestamine elektroonilisse süsteemi või edastamine ükskõik millises vormis või millisel teel on keelatud ilma Eesti Standardikeskuse poolt antud kirjaliku loata.

Kui Teil on küsimusi standardite autorikaitse kohta, palun võtke ühendust Eesti Standardikeskusega: Aru 10 Tallinn 10317 Eesti; www.evs.ee; Telefon: 605 5050; E-post: info@evs.ee

Right to reproduce and distribute Estonian Standards belongs to the Estonian Centre for Standardisation

No part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying, without permission in writing from Estonian Centre for Standardisation.

If you have any questions about standards copyright, please contact Estonian Centre for Standardisation: Aru str 10 Tallinn 10317 Estonia; www.evs.ee; Phone: +372 605 5050; E-mail: info@evs.ee

EUROPEAN STANDARD

EN 60335-2-37

NORME EUROPÉENNE

EUROPÄISCHE NORM

May 2000

ICS 97.040.50

Supersedes EN 60335-2-37:1995 + A1:1996 + A2:1999

English version

Safety of household and similar electrical appliances
Part 2-37: Particular requirements for commercial electric deep fat fryers
(IEC 60335-2-37:2000)

Sécurité des apparells électrodomestiques et analogues Partie 2-37: Règles particulières pour les friteuses électriques à usage collectif (CEI 60335-2-37:2000) Sicherheit elektrischer Geräte für den Hausgebrauch und ähnliche Zwecke Teil 2-37: Besondere Anforderungen für elektrische Friteusen für den gewerblichen Gebrauch (IEC 60335-2-37:2000)

This European Standard was approved by CEMELEC on 2000-04-01. 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 Dixembourg, 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 61E/348/FDIS, future fourth edition of IEC 60335-2-37, prepared by SC 61E of the IEC Technical Committee 61, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 60335-2-37 on 2000-04-01.

This European Standard replaces EN 60335-2-37:1995 and its amendments A1:1996 and A2:1999.

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) 2001-01-01

 date on which national standards conflicting with the EN have to be withdrawn

(dow) 2003-04-01

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 commercial electric deep fat fryers.

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, figures and notes which are additional to those in part 1 are numbered starting with 101.

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

National deviations from this European Standard are listed in annex ZB and are in addition to those in 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.

p NOTE In this document, p is used in the margin to indicate instructions for preparing the printed region

p Add:

Introduction

An investigation by CENELEC TC 61 has shown that all risks from products within the scope of this standard are fully covered by the Low Voltage Directive, 73/23/EEC. If the product has mechanical moving parts, a risk assessment in accordance with the Machinery Directive, 89/392/EEC, has shown that the risks are mainly of electrical origin and consequently this directive is not applicable. However, the relevant essential safety requirements of the Machinery Directive are covered by this standard together with the principal objectives of the Low Voltage Directive.

Endorsement notice

The text of the Interrational Standard IEC 60335-2-37:2000 was approved by CENELEC as a European Standard without any reodification.

p Add:

Annex ZB (informative)

A-deviations

Addition:

Clause

<u>Deviation</u> **Austria** (Elektroschutzverordnung 1996 - BGBI. Nr. 706/1995, § 7.15) 7.15

> If the marking of fixed appliances is not is ible after the appliance has been installed, the after in the after the after the after in the after in the after in the after the afte relevant information shall also be included in the instructions for use and on an additional

label which can be fixed near the appliance after installation.

INTERNATIONAL STANDARD

IEC 60335-2-37

Fourth edition 2000-02

Safety of household and similar electrical appliances –

Part 2-87: Particular requirements for commercial electric deep fat freers

Sécurité des appareils électrodomestiques et analogues -

Partie 2-37:

Règles particulières pour les friteuses électriques à usage collectif



Numbering

As from 1 January 1997 all IEC publications are issued with a designation in the $60000 \ \text{series}$.

Consolidated publications

Consolidated versions of some IEC publications including amendments are available. 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.

Validity of this publication

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 the date of the reconfirmation of the publication is available in the IEC catalogue.

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 to be found at the following IEC sources:

- IEC web site*
- Catalogue of IEC publications
 Published yearly with regular updates
 (On-line catalogue)*
- IEC Bulletin

 Available both at the IEC web site and as a printed periodical

Terminology, graphical and letter mbols

For general terminology, readers are referred to IEC 60050: International Electrotechnical Vocabulary (IEV).

For graphical symbols, and letter symbols and sins approved by the IEC for general use, readers are referred to publications IEC 60027: Letter symbols to be used in electrical technology, IEC 60417: Graphical symbols for use on equipment. Index, survey and compilation of the single sheets and IEC 6617: Graphical symbols for diagrams.

* See web site address on title page.

INTERNATIONAL STANDARD

IEC 60335-2-37

Fourth edition 2000-02

Safety of household and similar electrical appliances –

Part 2-87: Particular requirements for commercial electric deep fat freers

Sécurité des appareils électrodomestiques et analogues -

Partie 2-37:

Règles particulières pour les friteuses électriques à usage collectif

© IEC 2000 — Copyright - all rights reserved

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

International Electrotechnical Commission 3, rue de Varembé Geneva, Switzerland Telefax: +41 22 919 0300 e-mail: inmail@iec.ch IEC web site http://www.iec.ch



Commission Electrotechnique Internationale International Electrotechnical Commission Международная Электротехническая Комиссия

PRICE CODE

For price, see current catalogue

CONTENTS

		Page
FO	REWORD	3
Clau	use	
1	Scope	
2	Definitions	
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	9
9	Starting of motor-operated opliances	
10	Power input and current	10
11	Heating	10
12	Void	11
13	Leakage current and electric strength at operating temperature Void Moisture resistance Leakage current and electric strength	11
14	Void	11
15	Moisture resistance	11
16	Leakage current and electric strength	13
17	Overload protection of transformers and associated circuits	13
18	Endurance Abnormal operation Stability and mechanical hazards Mechanical strength Construction Internal wiring	13
19	Abnormal operation	13
20	Stability and mechanical hazards	14
21	Mechanical strength	14
22	Construction	15
23	Internal wiring	18
24	Components	18
25	Supply connection and external flexible cords	18
26	Terminals for external conductors	19
27	Provision for earthing	19 19
28	Screws and connections	19
29	Creepage distances, clearances and distances through insulation	19
30	Resistance to heat, fire and tracking	19
31	Resistance to rusting	20
32	Radiation, toxicity and similar hazards	20
Fig	ure 101	21
۸ ۳۰۰	neves	20

INTERNATIONAL ELECTROTECHNICAL COMMISSION

SAFETY OF HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES -

Part 2-37: Particular requirements for commercial electric deep fat fryers

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 precommendations 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 E. 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 conseponding 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.

International Standard IEC 60335-2-37 has been prepared by subcommittee 61E: Safety of electrical commercial catering equipment, of IEC technical committee 61: Safety of household and similar electrical appliances.

If forms the fourth edition of IEC 60335-2-37 and cancels and eplaces the third edition, published in 1994, its amendment 1 (1996) and amendment 2 (1998).

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

FDIS	Report on voting
61E/348/FDIS	61E/362/RVD

Full information on the voting for the approval of this part 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 third edition (1991) of that standard.

upplements or modifie.

J the IEC standard Safety ,

articular subclause of part 1 is not

Freasonable. Where this standard state.

ext in part 1 is to be adapted accordingly.

The following print types are used:

quirements: in roman type;

Ist specifications: in italic type

notes: in small objain type.

Words in bold in Repeat are defined in clause 2.

OTE 2 Subclauses, light and notes which are additional to those in part 1 are nun.

A billingual version of the standard may be issued at a later date.

SAFETY OF HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES -

Part 2-37: Particular requirements for commercial electric deep fat fryers

Scope

This clause of part 1 is replaced by:

This standard deals with the safety of electrically operated commercial deep fat fryers including pressurized types not intended for household use, their rated voltage being not more than 250 V for single-phase appliances connected between one phase and neutral and 480 V for other appliance

NOTE 1 These appliances are used for example in kitchens such as in restaurants, canteens, hospitals and commercial enterprises such as bakeries, butcheries, etc.

The electrical part of appliance making use of other forms of energy is also within the scope of this standard.

So far as is practicable, this standard deals with the common hazards presented by these types of appliances.

NOTE 2 Attention is drawn to the fact that

- board ships or aircraft, additional requirements may be for appliances intended to be used in vehicles
- 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:
- oure appliances. in many countries, additional requirements are specified for

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);
- continuous process appliances for the mass production of food.

Definitions

This clause of part 1 is applicable except as follows.

2.2.4 *Addition:*

NOTE The rated power input is the sum of the power inputs of all the individual elements in the appliance which can be on at one time; where there are several such combinations possible, that giving the highest power input is used in determining the rated power input

2.2.9 Replacement:

normal operation: Operation of the appliance under the following conditions:

The appliance is filled with oil to the minimum **indicated level**.