



# SLOVENSKI STANDARD SIST EN 60335-2-45:1997

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Nadomešča:

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**Safety of household and similar electrical appliances - Part 2: Particular requirements for portable electric heating tools and similar appliances (IEC 335-2-45:1996)**

Safety of household and similar electrical appliances -- Part 2-45: Particular requirements for portable heating tools and similar appliances

**iTeh STANDARD PREVIEW**

Sicherheit elektrischer Geräte für den Hausgebrauch und ähnliche Zwecke -- Teil 2-45: Besondere Anforderungen für ortsveränderliche Elektrowärmewerkzeuge und ähnliche Geräte

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Sécurité des appareils électrodomestiques et analogues -- Partie 2-45: Règles particulières pour les outils chauffants mobiles et appareils analogues

**Ta slovenski standard je istoveten z: EN 60335-2-45:1996**

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**ICS:**

13.120	Varnost na domu	Domestic safety
25.140.20	Električna orodja	Electric tools

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EUROPEAN STANDARD

**EN 60335-2-45**

NORME EUROPÉENNE

EUROPÄISCHE NORM

July 1996

ICS 25.140.20; 97.180

Supersedes EN 60335-2-45:1990 and its amendments

Descriptors: Household electrical appliances, soldering irons, portable electric tools, safety requirements, protection against electric shock, fire protection, protection against mechanical hazard

English version

**Safety of household and similar electrical appliances  
Part 2: Particular requirements for portable heating tools  
and similar appliances  
(IEC 335-2-45:1996)**

Sécurité des appareils  
électrodomestiques et analogues  
Partie 2: Règles particulières pour  
les outils chauffants mobiles et  
appareils analogues  
(CEI 335-2-45:1996)

Sicherheit elektrischer Geräte für den  
Hausgebrauch und ähnliche Zwecke  
Teil 2: Besondere Anforderungen für  
ortsveränderliche Elektrowärme-  
werkzeuge und ähnliche Geräte  
(IEC 335-2-45:1996)

[SIST EN 60335-2-45:1997](https://standards.iteh.ai/catalog/standards/sist/3e102e6c-0fe3-4491-b172-605898ae0cec/sist-en-60335-2-45-1997)

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This European Standard was approved by CENELEC on 1996-07-02. 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, 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 text of document 61/950/FDIS, future second edition of IEC 335-2-45, prepared by the IEC Technical Committee 61 was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 60335-2-45 on 1996-07-02.

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) 1997-04-01
- date on which national standards conflicting with the EN have to be withdrawn (dow) 1999-04-01

For products which have complied with EN 60335-2-45:1990 and its amendments A1:1992 and A51:1993 before 1999-04-01, as shown by the manufacturer or by a certification body, this previous standard may continue to apply for production until 2004-04-01.

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 portable electric heating tools and similar appliances.

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 of part 1 is to be adapted accordingly.

Subclauses 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.

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.

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## Endorsement notice

The text of the International Standard IEC 335-2-45:1996 was approved by CENELEC as a European Standard without any modification.

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NORME  
INTERNATIONALE  
INTERNATIONAL  
STANDARD

CEI  
IEC  
335-2-45

Deuxième édition  
Second edition  
1996-04

Sécurité des appareils électrodomestiques  
et analogues —

Partie 2:

Règles particulières pour les outils chauffants  
mobiles et appareils analogues

(standards.iteh.ai)

Safety of household and similar  
electrical appliances —

<https://standards.iteh.ai/en/standards/60335-2-45-1997/605898ae0cec/sist-en-60335-2-45-1997>

Part 2:

Particular requirements for portable heating  
tools and similar appliances

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

## SAFETY OF HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES

Part 2: Particular requirements for portable heating tools  
and similar appliances

## 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 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. IEC shall not be held responsible for identifying any or all such patent rights.

This part of International Standard IEC 335 has been prepared by IEC technical committee 61: Safety of household and similar electrical appliances.

It forms the second edition of IEC 335-2-45 and replaces the first edition, published in 1986, and its amendment.

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

FDIS	Report on voting
61/950/FDIS	61/1011/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 335-1 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 in IEC 335-1, so as to convert that publication into the IEC standard: Safety requirements for portable electric heating tools and similar appliances.

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.

#### NOTES

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. When a definition of part 1 concerns an adjective, the adjective and the associated noun are also in bold.

2 Subclauses which are additional to those in part 1 are numbered starting from 101.

The following additional differences exist in some countries:

- 2.2.9: Different conditions of normal operation are applied to soldering guns and plastic-cutting tools (USA).
- 6.1: Class 0 appliances are allowed if their rated voltage does not exceed 150 V; class 0I appliances are allowed (Japan).
- 6.1: Class 0 soldering irons are allowed if their rated power input does not exceed 18 W (Poland).
- 6.1: Class I dehorning tools are allowed; class 0 appliances are allowed if their rated voltage does not exceed 150 V and they are for indoor use only (USA).
- 11.7: The test for fire lighters is different (USA).
- 11.8: The modification does not apply (USA).
- 21.101: The drop test is different (USA).
- 24.1.3: Switches are tested for 6 000 cycles of operation (Canada and USA).
- 25.7: Lighter cords are allowed (USA).
- 25.7: The modification does not apply (Japan).
- 25.8: Shorter supply cords are allowed for class II dehorning tools (USA).



## SAFETY OF HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES

### Part 2: Particular requirements for portable heating tools and similar appliances

#### 1 Scope

This clause of part 1 is replaced by:

This standard deals with the safety of **portable electric heating tools** and similar appliances, their **rated voltage** being not more than 250 V.

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.

Appliances which may be used when mounted on a support are within the scope of this standard.

NOTE 1 – Examples of appliances that are within the scope of this standard are:

- soldering irons;
- desoldering irons;
- soldering guns;
- conduit soldering tools;
- thermoplastic conduit-welding tools;
- household film-welding appliances;
- plastic-cutting tools;
- branding tools;
- burning-in pens;
- stripping pliers;
- glue guns;
- dehorning tools;
- paint strippers;
- fire lighters;
- heat guns.

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.

## NOTES

2 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 and similar authorities.

3 This standard does not apply to:

- hand-held motor-operated electric tools (IEC 745);
- transportable motor-operated electric tools (IEC 1029);
- appliances intended 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);
- tools for high-frequency heating;
- arc welding equipment.

## 2 Definitions

This clause of part 1 is applicable except as follows:

### 2.2.9 Replacement:

**normal operation:** Operation of appliances under the following conditions:

Appliances having a stand are operated on the stand, unless otherwise specified.

Other appliances are operated in accordance with the instructions for use, unless otherwise specified.

**Soldering guns** and plastic-cutting tools incorporating a **biased-off switch** are operated in cycles in accordance with the instructions for use but they are switched on for at least 12 s with rest periods not exceeding 48 s. For **soldering guns**, the on-period is such that the temperature at the tip reaches at least 300 °C at the end of the first on-period.

**Household film-welding appliances** are operated in cycles in accordance with the instructions for use but they are switched on at least for the time necessary to weld together two sheets of plastic film with rest periods not exceeding 2 min. The plastic film is high pressure (low density) polyethylene, each sheet having a thickness of 50 µm.

**Heat guns** are operated with the hot air flow horizontal.

**Fire lighters** are operated to ignite charcoal placed in a tray having a diameter of 600 mm and a side 50 mm high. The pile of charcoal is 500 mm in diameter and 100 mm high at its centre.

**Contact fire lighters** are positioned with the heating element horizontal and inserted in the centre of the charcoal.

**Hot-air fire lighters** are positioned with the hot air flow horizontal or directed downwards to the maximum angle allowed by the construction, but not more than 45°, whichever is more unfavourable.

2.101 **soldering iron:** Appliance having a soldering tip which is heated by a heating element.

2.102 **desoldering iron:** Appliance for melting and removing solder.

2.103 **soldering gun:** Appliance incorporating a transformer, the soldering tip being part of the secondary circuit.

2.104 **conduit-soldering tool:** Appliance used for joining metal piping by means of solder.

2.105 **household film-welding appliance:** Appliance for household use only, used for welding or cutting thin thermoplastic sheets by means of electrically heated parts between which the material is clamped.

2.106 **branding tool:** Appliance for marking wood, leather and other materials by means of a heated metal stamp.

2.107 **burning-in pen:** Appliance for scribing on wood, leather and other materials by means of a heated tip.

2.108 **dehorning tool:** Appliance for burning out horn buds.

2.109 **heat gun:** Appliance that produces a jet of hot air.

NOTE – Heat guns may be used for fusing materials or for softening paint or plastics.

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2.110 **paint stripper:** Electrically heated appliance for softening paint.

NOTE – Paint strippers may incorporate a scraper.

2.111 **fire lighter:** Appliance for igniting solid fuel such as charcoal or wood.

2.112 **contact fire lighter:** Fire lighter incorporating a heating element, which is in direct contact with the fuel.

2.113 **hot-air fire lighter:** Fire lighter which incorporates a fan and a heating element and which blows hot air at the fuel.

2.114 **thermoplastic conduit-welding tool:** Appliance for welding conduit by partly melting the thermoplastic material of a separate fitting which has an integral heating wire and is used only once.

2.115 **biased-off switch:** Switch which automatically returns to the **off position** when its actuating member is released.