



SLOVENSKI STANDARD
SIST EN 60335-2-2:2003/A11:2011

01-maj-2011

Gospodinski in podobni električni aparati - Varnost - 2-2. del: Posebne zahteve za sesalnike prahu in aparate za čiščenje s sesanjem vode - Dodatek A11

Household and similar electrical appliances - Safety - Part 2-2: Particular requirements for vacuum cleaners and water-suction cleaning appliances

Sicherheit elektrischer Geräte für den Hausgebrauch und ähnliche Zwecke - Teil 2-2: Besondere Anforderungen für Staubsauger und Wassersauger

Appareils électrodomestiques et analogues - Sécurité - Partie 2-2: Règles particulières pour les aspirateurs et les appareils de nettoyage à aspiration d'eau

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Ta slovenski standard je istoveten z: EN 60335-2-2:2003/A11:2010

ICS:

13.120	Varnost na domu	Domestic safety
97.080	Aparati za nego tal	Floor treatment appliances

SIST EN 60335-2-2:2003/A11:2011 **en**

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 60335-2-2/A11

May 2010

ICS 13.120; 97.080

English version

**Household and similar electrical appliances -
Safety -
Part 2-2: Particular requirements for vacuum cleaners
and water-suction cleaning appliances**

Appareils électrodomestiques
et analogues - Sécurité -
Partie 2-2: Règles particulières pour
les aspirateurs et les appareils
de nettoyage à aspiration d'eau

Sicherheit elektrischer Geräte für
den Hausgebrauch und ähnliche Zwecke -
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für Staubsauger und Wassersauger

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This amendment A11 modifies the European Standard EN 60335-2-2:2003; it was approved by CENELEC on 2010-04-14. 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, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

CENELEC

European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

Management Centre: Avenue Marnix 17, B - 1000 Brussels

Foreword

A proposal to amend EN 60335-2-2:2003, document CLC/TC 61(SEC)1681, was discussed during the Brussels meeting of CENELEC TC 61 in June 2009, when it was decided to submit a draft for an amendment to the Unique Acceptance Procedure.

The draft was circulated in June 2009 and was approved by CENELEC as amendment A11 to EN 60335-2-2:2003 on 2010-04-14.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN and CENELEC shall not be held responsible for identifying any or all such patent rights.

The following dates are applicable:

- latest date by which the amendment has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2011-05-01
- latest date by which the national standards conflicting with the amendment have to be withdrawn (dow) 2013-04-14

This amendment supplements or modifies the corresponding clauses of EN 60335-2-2:2003.

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

There are no national deviations from this amendment.

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1 Scope

Replace the fifth paragraph including the two dashed items by the following:

As far as is practicable, this standard deals with the common hazards presented by appliances that are encountered by all persons in household and similar environments.

However, in general, it does not take into account:

- **children** playing with the appliance,
- the use of the appliance by **very young children**
- the use of the appliance by **young children** without supervision.

It is recognized that **very vulnerable people** may have needs beyond the level addressed in this standard.

3 Definitions

3.6.3

accessible part

Modification:

Insert “and probe 18” after “test probe B”.

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Add the following new definitions:

[SIST EN 60335-2-2:2003/A11:2011](https://standards.iteh.ai/catalog/standards/sist/8e1d07f2-55b2-410e-86c2-c629cc4d58b7/sist-en-60335-2-2-2003-a11-2011)

3.Z101

children

young persons comprising **very young children**, **young children** and **older children**

NOTE **Children** are not expected to perform cleaning or **user maintenance** of the appliance.

3.Z102

very young children

young persons aged from 0 up to and including 36 months

NOTE **Very young children** are not expected to use appliances.

3.Z103

young children

young persons older than 36 months and younger than 8 years

NOTE **Young children** are not expected to use appliances safely unless continuous supervision is given.

3.Z104

older children

young persons aged from 8 years up to and including 14 years

NOTE **Older children** can use appliances safely after they have been given appropriate supervision or instruction concerning use of the appliance.

3.Z105**vulnerable people**

persons having reduced physical, sensory or mental capabilities (e.g. partially disabled, elderly having some reduction in their physical and mental capabilities), or lack of experience and knowledge (e.g. **older children**)

NOTE **Vulnerable people** can use appliances safely after they have been given appropriate supervision or instruction concerning use of the appliance.

3.Z106**very vulnerable people**

persons having very extensive and complex disabilities

NOTE **Very vulnerable people** are not expected to use appliances safely unless continuous supervision is given or appliances are adapted accordingly with arrangements beyond the scope of this standard.

3.Z107**use of the appliance**

all actions required to have the appliance perform its intended function, such as plugging in, switching on, using, regulating, cleaning the appliance or performing user maintenance

7 Markings and instructions**7.10 Add:**

Devices used to start/stop operational functions of the appliance, if any, shall be distinguished from other manual devices by means of shape, or size, or surface texture, or position, etc. A tactile or an audible and visual feedback shall give an indication that the device has been operated.

NOTE The sound of the motor switching ON/OFF is regarded as audible feedback. The stopping of the typical function (e.g. stopping of suction function or the stopping of the vibration on the body of the appliance or on the hose/nozzle) is regarded as tactile means.

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7.12 Replace the text of 7.12 in Part 1 and the addition in Part 2-2 by:

7.12 Instructions for use shall be provided with the appliance so that the appliance can be used safely.

NOTE Instructions for use may be marked on the appliance as long as they are visible in normal use.

It is necessary to take precautions during **user maintenance**, appropriate details shall be given.

The instructions shall include the substance of the following:

This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Children shall not play with the appliance. Cleaning and user maintenance shall not be made by children without supervision.

If a vacuum cleaner can be equipped with a **hand-held accessory** with rotating parts a warning has to be given concerning entrapment.

The instructions for appliances having a current-carrying hose operating at other than **safety extra-low voltage** shall include the substance of the following:

CAUTION: This hose contains electrical connections:

- do not use to suck up water (for vacuum cleaners only);
- do not immerse in water for cleaning;
- the hose should be checked regularly and must not be used if damaged.

The instructions for vacuum cleaners incorporating rotating brushes or similar devices, and **water-suction cleaning appliances**, shall state that the plug must be removed from the socket-outlet before cleaning or maintaining the appliance.

If symbol 5935 of IEC 60417 is used, its meaning shall be explained.

Compliance is checked by inspection.

Add the following new subclause before 7.12.1:

7.12.Z101 The specific instructions related to the safe operation of this appliance (as given in 7.12 of this standard) shall be collated together in the front section of the user instructions. The height of the characters, measured on the capital letters, shall be at least 4 mm.

These instructions shall also be available in an alternative format, e.g. on a website.

7.14 *Add:*

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NOTE Z101 For the evaluation of legibility and clarity of safety warnings guidance can be found in IEC 62079.

8 **Protection against access to live parts**

[SIST EN 60335-2-2:2003/A11:2011](http://standards.iteh.ai/catalog/standards/sist/8e1d07f2-55b2-410e-86c2-c629cc4d58b7/sist-en-60335-2-2-2003-a11-2011)
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Add:

8.1.1 *Replace the third paragraph by the following:*

Test probe B and probe 18 of IEC 61032 are applied in turn without appreciable force, the appliance being in every possible position. Through openings, the test probe is applied to any depth that the probe will permit and is rotated or angled before, during and after insertion to any position. If the opening does not allow the entry of the probe, the force on the probe in the straight position is increased to 20 N when probe B is used or 10 N when probe 18 is used. If the probe then enters the opening, the test is repeated with the probe in the angled position. However when using test probe 18 the appliance shall be fully assembled as in normal operation without any parts removed; parts that are intended to be removed for user maintenance shall not be removed.

8.2 *Modification*

Replace “test probe B of IEC 61032” by “test probes of IEC 61032”.

11 **Heating**

11.8 *Modification*

*In Table 3 delete the row “External enclosure of **motor-operated appliances**, except handles held in normal use”.*

Add the following Table Z101.

Table Z101 – Maximum temperature rises for external surfaces under normal operating conditions

Surface ^d	Temperature rise of external surfaces K	
	Surfaces of appliances situated up to 850 mm above the floor after installation and portable appliances ^a	Surfaces of appliances situated more than 850 mm above the floor after installation (e.g. central vacuum cleaners) ^b
Bare metal	40	45
Coated metal ^e	45	55
Glass and ceramic	55	60
Plastic and plastic coating > 0,3 mm	60	65

^a For air outlets the above values can be increased by 10 K.

^b For air outlets the above values can be increased by 5 K.

^c The temperature rise limit of plastic also applies for plastic material having a metal finish of thickness less than 0,1 mm.

^d When the thickness of the plastic coating does not exceed 0,3 mm, the temperature rise limits of the coated metal or of glass and ceramic material apply.

^e Metal is considered coated when a coating made by enamel or non substantially plastic coating is used.

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20 Stability and mechanical hazards

Add: [SIST EN 60335-2-2:2003/A11:2011](https://standards.iteh.ai/catalog/standards/sist/8e1d07f2-55b2-410e-86c2-c629cc4d58b7/sist-en-60335-2-2-2003-a11-2011)
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20.2 Add the following requirement:

Appliances are fully assembled as in normal operation without any parts removed.

Replace the first paragraph of compliance by:

Compliance is checked by inspection, by the tests of 21.1 and by means of:

- a test probe that is similar to test probe B of IEC 61032 but having a circular stop face with a diameter of 50 mm, instead of the non circular face, applied with a force of 5 N and
- test probe 18 of IEC 61032, applied with a force of 2,5 N.

Additional subclauses:

20.Z101 Driven parts of an appliance shall not become accessible if the appliance is switched on by overturning.

The appliance is fully assembled as in normal operation without any parts removed. The appliance connected to the mains is overturned in the most unfavourable position. If the appliance is activated as consequence of overturning, hazardous moving parts shall not be accessible according to 20.2.

The test is made in the most unfavourable orientation.

20.Z102 Inadvertent access to hazardous rotating brushes and similar devices during normal operation shall be prevented, so far as is reasonably practicable.

Appliances are fully assembled as in normal operation without any parts removed. Compliance is checked by using the foot probe as illustrated in Figure Z101. The appliance is placed on a hard flat surface, being in the normal operating position. Height adjustment components such as rollers or wheels are adjusted to the most unfavourable position. The base of the foot probe is held horizontally and applied to any point on the periphery of the cleaner in contact with the floor without appreciable force. The test is conducted under static conditions.

21 Mechanical strength

21.1 Modification:

Replace the third paragraph with:

The appliance is rigidly supported and three blows, having an impact energy of 1,0 J, are applied to every point of the enclosure that is likely to be weak.

Additional subclause:

21.Z101 Hand-held appliances are subjected to the following test:

The appliance is put on an horizontal surface 700 mm above a rigidly supported hardwood board and operated while supplied at rated voltage until steady state conditions are reached.

It is then allowed to drop freely. The test is carried out five times, the appliance being held in different positions likely to occur.

The appliance shall not be damaged to such an extent that compliance with this standard is impaired. In particular, the appliance shall not emit flames or molten metal and the requirements of Clauses 8 and 29 shall be fulfilled.

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22 Construction

22.12 *Add at the end of the first sentence of the first paragraph “, including an ingestion or a choking hazard for **vulnerable people**”.*

22.Z101 *Hinged handles of vacuum cleaners intended to be free standing shall require a specific action to operate them, such as a lever, the handle release mechanism or similar.*

Compliance is checked by inspection.

22.Z102 Supply cords of appliances shall not be damaged by the appliance running over them.

The functional openings of power rotating brushes, with the exception of **motorized cleaning heads**, shall not exceed 120 mm along the major dimension of the opening.

Compliance is checked by inspection and measurement.