



**SLOVENSKI STANDARD**  
**SIST EN 60335-2-60:1995/A53:1997**  
**01-junij-1997**

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**Safety of household and similar electrical appliances - Part 2: Particular requirements for whirlpool baths and similar equipment - Amendment A53**

Safety of household and similar electrical appliances -- Part 2: Particular requirements for whirlpool baths and similar equipment

Sicherheit elektrischer Geräte für den Hausgebrauch und ähnliche Zwecke -- Teil 2: Besondere Anforderungen für Sprudelbadegeräte und ähnliche Anlagen

Sécurité des appareils électrodomestiques et analogues -- Partie 2: Règles particulières pour les baignoires à système de brassage d'eau et matériels analogues

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**Ta slovenski standard je istoveten z: EN 60335-2-60:1991/A53:1997**

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**ICS:**

13.120	Varnost na domu	Domestic safety
91.140.70	Sanitarne naprave	Sanitary installations

**SIST EN 60335-2-60:1995/A53:1997** en

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EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

**EN 60335-2-60/A53**

January 1997

UDC 644.68:696.14:646.71:64.06-83:614.8  
ICS 97.180

Descriptors: Household electrical appliances, bath, safety requirements, protection against electric shock, fire protection, protection against mechanical hazard

English version

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Part 2: Particular requirements for whirlpool baths and similar equipment**

Sécurité des appareils  
électrodomestiques et analogues  
Partie 2: Règles particulières pour les  
baignoires à système de brassage  
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This amendment A53 modifies the European Standard EN 60335-2-60:1991; it was approved by CENELEC on 1996-12-09. 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, 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

A proposal to amend EN 60335-2-60:1991, document CLC/TC 61(SEC)759, was circulated under the enquiry procedure in December 1990. This proposal was discussed during the Brussels meeting in November 1991, when it was decided to request CEN TC 163 to comment on it. These comments, document CLC/TC 61(SEC)910, were discussed during the El Campello meeting in October 1993 when it was decided to submit a draft for an amendment to the Unique Acceptance Procedure (UAP).

This procedure started in August 1994 but due to the number of comments received, the draft was rediscussed during the Dublin meeting in May 1995, when it was decided to submit a second draft to the formal vote.

This draft was circulated as prAD in January 1996 and was ratified by CENELEC as amendment A53 on 1996-12-09.

This amendment has been prepared by the secretariat of CENELEC Technical Committee TC 61.

The following dates are applicable:

- |  |       |            |
|--|-------|------------|
| - latest date of publication of an identical national standard | (dop) | 1997-06-01 |
| - date of withdrawal of conflicting national standards         | (dow) | 1999-06-01 |

For products which have complied with EN 60335-2-60:1991 and its amendments A51:1993 and A52:1994 before 1999-06-01, as shown by the manufacturer or by a certification body, this previous standard may continue to apply for production until 2001-06-01.

This amendment supplements or modifies the corresponding clauses of EN 60335-2-60:1991 and its amendments.

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

There are no national deviations from this amendment.

NOTE - Amendment numbers commencing A1 refer to the endorsement of IEC amendments, while those commencing A51 originate in CENELEC.

**7 Marking****7.12 Add:**

The instructions shall state that the appliance should be supplied through a residual current device (RCD) with a tripping current not exceeding 30 mA.

**22 Construction****22.11 Replace the addition by:**

Appliances in which air is circulated shall be constructed so that water cannot penetrate into the motor and come into contact with live parts or basic insulation.

*Compliance is checked by the following test:*

*The overflow outlet of whirlpool baths is blocked and the bath filled until water overflows. Non-return valves are rendered inoperative one at a time.*

*Separate appliances intended to be used with a conventional bath are placed on the floor, except that portable mats are placed in a bath filled with water. The mat is then raised to the most unfavourable position allowed by the construction of the appliance but to a height not exceeding 2 m. Non-return valves are rendered inoperative one at a time.*

NOTE - The test is carried out with all possible methods of connecting the hose.

*After the test there shall be no trace of water on insulation which could result in a reduction of creepage distances and clearances below the values specified in clause 29.*

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**22.101 Delete this subclause****22.102 Replace this subclause by:**

Whirlpool baths shall be constructed so that the quantity of water remaining in the appliance after draining the bath and which is returned to the bath when it is next used, shall not exceed 0,5 l or 0,2 % of the volume of the bath, whichever is less.

NOTE - The volume of the bath is considered to be the volume of water required to fill the bath until water starts to flow through the overflow outlet.

*Compliance is checked by any suitable method such as measurements using chemical dilution, weighing or determination of volume.*

**22.103** *Replace this subclause by:*

Whirlpool baths shall be constructed so that hair cannot be drawn into apertures due to water suction if this could result in a hazard.

*Compliance is checked by the following test:*

*The appliance is installed in accordance with the instructions for installation and filled as specified for normal load.*

*50 g of medium or fine natural human hair are attached to a wooden rod, 25 mm in diameter and 300 mm in length, the free length of the hair being 400 mm. The hair is saturated for at least 2 min in the bath water.*

*The free end of the hair is placed over the suction opening. The appliance is supplied at rated voltage. During operation, the hair is moved from side to side for up to 2,5 min in an attempt to get it sucked completely into the pipe.*

*The rod is pulled in order to withdraw the hair from the water and the pull force is measured*

- *the rod being pulled vertically;*
- *the rod being pulled at an angle of approximately 40° to the vertical.*

*If the bath is provided with a detachable cover for the suction opening, the test is also carried out with the cover in place. During the test, the cover may be displaced when it is swept by the hair.*

*The test is carried out 5 times.*

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*The force shall not exceed 20 N.*

**NOTES**

- 1 If the bath has more than one suction opening, these are tested in turn.
- 2 The hair is brushed periodically to keep it tangle free.