SLOVENSKI STANDARD
SIST EN 60312:2001/A1:2001

01-februar-2001

Amendment to clauses 1, 2.5, 4.6, 5.1, 5.2, Figures 10 and 20, A.7 and addition of A.10 and A.11

Amendment to clauses 1, 2.5, 4.6, 5.1, 5.2, Figures 10 and 20, A.7 and addition of A.10 and A.11

Staubsauger für den Hausgebrauch - Prüfverfahren zur Bestimmung der Gebrauchseigenschaften

Aspirateurs de poussière à usage domestique - Méthodes de mesure de l'aptitude à la fonction

Ta slovenski standard je istoveten z: **EN 60312:1998/A1:2000**

ICS:

97.080	Aparati za nego tal	Floor treatment appliances

SIST EN 60312:2001/A1:2001 **en**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 60312/A1

August 2000

ICS 97.080

English version

Vacuum cleaners for household use
Methods of measuring the performance
(IEC 60312:1998/A1:2000)

Aspirateurs de poussière à usage domestique
Méthodes de mesure de l'aptitude à la fonction
(CEI 60312:1998/A1:2000)

Prüfverfahren zur Bestimmung der Gebrauchseigenschaften von Staubsaugern für den Hausgebrauch und ähnliche Zwecke
(IEC 60312:1998/A1:2000)

This amendment A1 modifies the European Standard EN 60312:1998; it was approved by CENELEC on 2000-06-01. 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, Czech Republic, 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

Ref. No. EN 60312:1998/A1:2000 E

Foreword

The text of document 59F/104/FDIS, future amendment 1 to IEC 60312:1998, prepared by SC 59F, Floor treatment appliances, of IEC TC 59, Performance of household electrical appliances, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as amendment A1 to EN 60312:1998 on 2000-06-01.

The following dates were fixed:

- latest date by which the amendment has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2001-03-01
- latest date by which the national standards conflicting with the amendment have to be withdrawn (dow) 2003-06-01

Endorsement notice

The text of amendment 1:2000 to the International Standard IEC 60312:1998 was approved by CENELEC as an amendment to the European Standard without any modification.

NORME INTERNATIONALE

INTERNATIONAL STANDARD

CEI
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60312

1998

AMENDEMENT 1
AMENDMENT 1
2000-04

Amendement 1

Aspirateurs de poussière à usage domestique – Méthodes de mesure de l'aptitude à la fonction

Amendment 1

Vacuum cleaners for household use – Methods of measuring the performance

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FOREWORD

This amendment has been prepared by subcommittee 59F: Floor treatment appliances, of IEC technical committee 59: Performance of household electrical appliances.

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

FDIS	Report on voting
59F/104/FDIS	59F/106/RVD

Full information on the voting for the approval of this amendment can be found in the report on voting indicated in the above table.

The committee has decided that the contents of the base publication and its amendment will remain unchanged until 2002. At this date, the publication will be

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

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Replace the title of clause 2.5 by the following:

Fibre removal from carpets and upholstery

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1.2 Normative references

Insert in the list the titles of the following standards:

ISO 2439:1997, *Flexible cellular polymeric materials – Determination of hardness (indentation technique)*

ISO 3386-1:1986, *Polymeric materials, cellular flexible – Determination of stress-strain characteristics in compression – Part 1: Low-density materials*

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1.3.21 fibre removal ability

Replace the text of the definition by the following:

time, in seconds, required to remove a quantity of fibres from a test surface

2.5 Fibre removal from carpets

Replace the title and text of this clause by the following:

2.5 Fibre removal from carpets and upholstery

The vacuum cleaner shall be equipped with the cleaning head designed for the surface to be cleaned.

2.5.1 Fibre removal from carpets

2.5.1.1 Test carpet

A test carpet, in accordance with 5.1.1, shall be used. Test carpets designated for fibre removal tests shall not be used for other tests.

NOTE It is recommended to use a dark-coloured unpatterned test carpet.

Prior to each measurement, the surface of the test carpet shall be cleaned thoroughly until the carpet surface is visually free of remaining fibres.

2.5.1.2 Distribution of fibres

For the distribution of fibres, a stencil, in accordance with figure 10A, shall be used. The stencil shall be 3 mm in thickness, have 95 holes, 30 mm in diameter, and be free from burrs. The stencil shall be placed on the test carpet with its 1 000 mm long sides parallel to the warp.

(150 ± 5) mg of fibre material, in accordance with 5.1.3, shall be plucked by hand into 95 approximately equal portions, which are then pressed by the thumb, without rubbing, in the centres of the holes of the stencil.

After removing the stencil, the fibres are embedded into the carpet by carrying out five double strokes with a roller, in accordance with 5.2.6.2. The direction of the strokes shall be at right angles to the warp of the carpet, and the stroke speed shall be about 0,5 m/s. If the roller is less than 1 m in length, the rolling schedule is repeated until the entire test area has been covered.

2.5.1.3 Determination of fibre removal ability from carpets

Prior to each measurement, fibres sticking to the cleaning head shall be removed.

The cleaning head is passed once over the fibre-covered area in a zig-zag pattern with the forward strokes at right angles to the warp. Remaining fibres may then be removed by carrying out strokes in the direction of the pile not following a specific pattern. The stroke speed shall be (0,5 ± 0,02) m/s and care shall be taken that the cleaning head is in full contact with the test carpet during the cleaning.

The time to remove all fibres (judged visually by the operator from an erect position) shall be recorded. If the cleaning time exceeds 180 s, the cleaning is discontinued.

Three separate measurements shall be carried out to establish a mean value of the fibre removal ability. The time to remove fibres sticking to the cleaning head shall not be taken into account.

2.5.2 Fibre removal from upholstery

2.5.2.1 Test cushion

A test cushion, in accordance with 5.1.6, shall be used. Prior to each measurement, the surface of the test cushion shall be cleaned thoroughly until the cushion surface is visually free of remaining fibres.

The test cushion shall be placed in a wooden frame, in accordance with figure 10B, to give a working height of about 480 mm above the floor. The frame shall be provided with an adjustable stop strip, which shall rest on the test cushion and be immovable during the measurements.

2.5.2.2 Distribution of fibres

For the distribution of fibres, a stencil, in accordance with figure 10C, shall be used. The stencil shall be 2 mm in thickness, have 23 holes, 30 mm in diameter, and be free from burrs.

The stencil shall be placed on the test cushion with its 500 mm long sides parallel to the 800 mm long sides of the cushion in such a way that the distance between the stop strip and the centre line of the nearest row of holes is equal to the active depth of the cleaning head.

(45 ± 1) mg of fibre material, in accordance with 5.1.3, shall be plucked by hand into 23 approximately equal portions, which are then pressed by the thumb, without rubbing, in the centres of the holes of the stencil.

2.5.2.3 Determination of fibre removal ability from upholstery

Prior to each measurement, fibres sticking to the cleaning head shall be removed.

After removing the stencil, the cleaning head is passed once over the fibre-covered area in a zig-zag pattern with the forward strokes at right angles to the stop strip. Remaining fibres may then be removed by carrying out strokes parallel to the stop strip not following a specific pattern. Fibres, which have been pushed against the stop strip, may be removed by strokes along the strip. The stroke speed shall be (0,5 ± 0,02) m/s and care should be taken that the cleaning head is in full contact with the test cushion during the cleaning.

The time to remove all fibres (judged visually by the operator from an erect position) shall be recorded. If the cleaning time exceeds 300 s the cleaning is discontinued.

Three separate measurements shall be carried out to establish a mean value of the fibre removal ability. The time to remove fibres sticking to the cleaning head shall not be taken into account.

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4.6 Bump test

Add the following:

The purpose of this test is to determine the ability of vacuum cleaners to sustain stresses incurred when overrunning thresholds and bumping against doorposts. The test is only applicable to vacuum cleaners that in normal use are pulled by the user with the tube grip of the suction hose.

NOTE Standard atmospheric conditions according to 1.4.1 are not required.

4.6.1 Test equipment

The test shall be carried out on a flat hardwood floor allowing a running distance of (2 ± 0,1) m and with provisions for fastening of the following test obstacles:

- a threshold made from polyamide 6 or of wood of equivalent hardness, with cross-sectional dimensions according to figure 20A, positioned at right angles to the centre line of the test surface at a distance of 1 m beyond the start position of the cleaner (see figure 20B);
- a doorpost made from sheet steel, with dimensions according to figure 20B, positioned at either side of the centre line at a distance of 2 m beyond the start position of the cleaner.

NOTE The wooden floor may be covered with a transport belt of rubber plastic for resetting the cleaner to its start position (see 4.6.3).

The forward movement of the cleaner is brought about by applying a force to the tube grip, at a height of (800 ± 50) mm above the test surface and along its centre line, so as to give the cleaner a velocity of $1\,^{+0}_{-0,1}$ m/s at a distance of $0,8\,^{+0,1}_{-0}$ m beyond its start position.

In order to keep the cleaner close to the centre line during the test, it is recommended to use either a guidance system with suitably low friction allowing a clearance of $20\,^{+0}_{-5}$ mm on either side of the cleaner or a synchronous running trolley with adjustable side boards.

4.6.2 Test cycle

Each test cycle consists of a sequence of 22 forward runs comprising

- 10 overrunnings of the threshold;
- 1 bumping against a doorpost to the left (or right);
- 10 overrunnings of the threshold;
- 1 bumping against a doorpost to the right (or left).

4.6.3 Test procedure

Prior to the test, the cleaner shall be equipped with a clean dust receptacle and filters according to 1.4.5.

In the case of overrunning of the threshold, the cleaner shall be allowed to come to rest softly at the end of the running distance by ceasing to apply the force to the tube grip when the cleaner has reached a distance of 1,5 m beyond its start position and by using an absorber made from foam rubber.

In the case of bumping against a doorpost, the force applied to the tube grip shall be such as to maintain the test velocity until the moment just before the bump.

After each run, the cleaner is reset to its start position avoiding the loading of its wheels or slide bars. Between each run, a pause of at least 5 s should be allowed.

NOTE For details of automated equipment incorporating a transport belt for resetting the cleaner to its start position, see A.11.

During the test, the cleaner shall run intermittently with periods of 15 min on and 15 min off, which will not necessarily be synchronous with the test cycles.