



SLOVENSKI STANDARD
SIST EN 60456:1998/A11:1998
01-januar-1998

Electric clothes washing machines for household use - Methods for measuring the performance - Amendment A11

Electric clothes washing machines for household use - Methods for measuring the performance - Amendment A11

Elektrische Waschmaschinen für den Hausgebrauch - Prüfverfahren zur Bestimmung der Gebrauchseigenschaften

Machines électriques à laver le linge pour usage domestique - Méthodes de mesure de l'aptitude à la fonction

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Ta slovenski standard je istoveten z: EN 60456:1994/A11:1995

ICS:

97.060 Aparati za nego perila Laundry appliances

SIST EN 60456:1998/A11:1998 en

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 60456/A11

August 1995

UDC 648.235-83:620.1
ICS 97.060

Descriptors: Household electrical appliances, washing machines, spin extractors, performance, test methods, comparative tests

English version

Electric clothes washing machines for household use
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Machines électriques à laver le linge
pour usage domestique
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Elektrische Waschmaschinen für den
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Gebrauchseigenschaften



REPUBLIKA SLOVENIJA
MINISTRSTVO ZA ZNANOST IN TEHNOLOGIJO
Urad RS za standardizacijo in meroslovje
LJUBLJANA

SIST. EN 60456/A11

<https://standards.iteh.ai/>
PREVZET PO METODI RAZGLASITVE
1571c90a9d/sist/5544f7c2-2c31-4069-87a5-1571c90a9d/sist/60456-1998-a11-1998

This amendment A11 modifies the European Standard EN 60456:1994; it was approved by CENELEC on 1995-03-06. 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

This amendment was prepared by WG 1 of the Technical Committee CENELEC TC 59X, Consumer information related to household electrical appliances.

The text of the draft was submitted to the Unique Acceptance Procedure and was approved by CENELEC as amendment A11 to EN 60456:1994 on 1995-03-06.

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) 1996-03-15
- latest date by which the national standards conflicting with the amendment have to be withdrawn (dow) 1996-03-15

This amendment deals with those test and control procedures that are required for the Commission Directive on energy labelling and standard product information of household washing machines 92/75/EEC and is based on the latest work of IEC/TC 59D WG 7. It also adds permitted tolerances to values declared by the manufacturer and control procedures for checking these declared values.

The modifications described in this amendment specify an improved test method for the performance of the 60° C washing cycle and some linked criteria to ensure test results which are sufficiently reproducible.

Clauses, subclauses and figures which are in addition to those in EN 60456:1994 are numbered starting with 101.



The following modifications apply to EN 60456:1994:

4.2.5.1 *Reference detergent A*

Table 2, NOTE 1 - 1)

Replace: "Spray dried" by "Basic".

4.2.5.2 *Reference detergent B*

Table 4

Replace: "Spray dried" by "Basic".

4.2.6.1 *Ballast for cotton*

Way of loading the machine

Replace the existing paragraphs by the following:

For the determination of the washing performance (see 5.1.1) the machines will be loaded with the ballast and soiled strips (see 5.1.1.2) in the following order:

First: 2 pillowcases

Then: half the amount of soiled strips **fixed on hand-towels** (see figure 101)

Then: 1 sheet
1 pillowcase (if there is still one)
half of the amount of hand-towels

Then: half of amount of soiled strips **fixed on hand-towels** (see figure 101)

Then: rest of the pillowcases, sheets and hand-towels.

5.1.1.1 *Principle of measurement*

Add at the end of the first paragraph:

For the purpose of declaration of the washing performance only reference detergent "A" according to 4.2.5.1 shall be used.

5.1.1.2 *Specimens*

Add at the end of the first paragraph:

The strips have to be fixed on the hand-towels (see figure 101) with metal-free fasteners.

Delete the third paragraph.

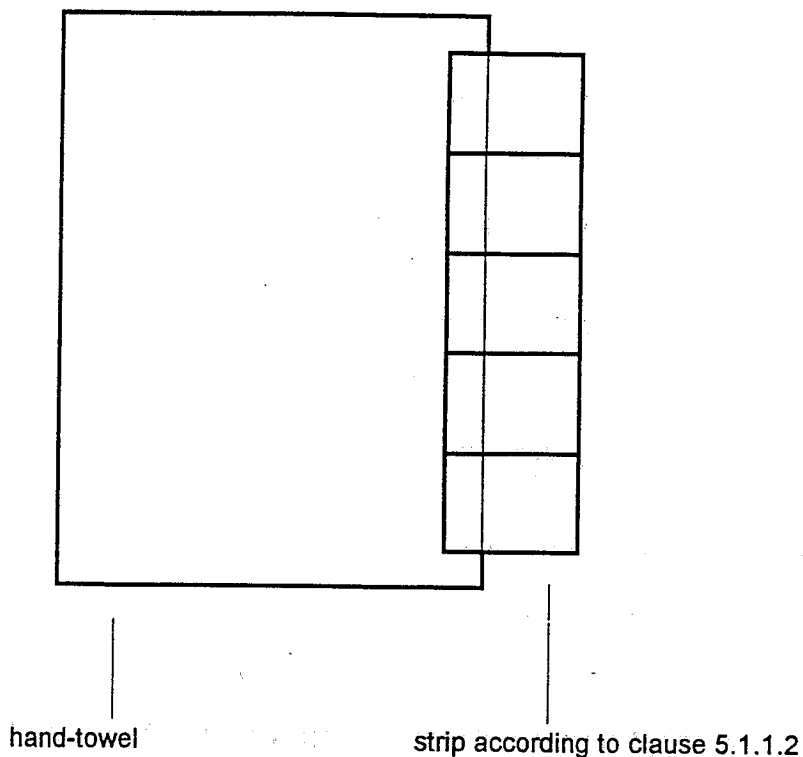


Figure 101
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5.1.1.4 *Reflectance measurement*

Line: - point 100: reference white
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 Replace: (magnesium oxide) by (barium sulphate).

5.3.2 *Load*

Replace the second paragraph by:

The mass of the ballast (M1) is determined to an accuracy of 5 g. The ballast is then submitted to a complete cycle of washing and rinsing in the following conditions:

5.3.2.1 *Spin extractors incorporated in a washing machine*

Add after the second paragraph:

When determining the water extraction efficiency to be declared according to the Commission Directive on energy labelling and standard product information of household washing machines the washing and rinsing cycle shall be performed in the machine according to the manufacturer's instructions for the 60° C cotton cycle, with the reference detergent "A" given in 4.2.5.1.

5.3.5 *Method of expressing results*

Replace the second paragraph by:

The water extraction efficiency shall be expressed in percentage.

5.9 *Determination of airborne acoustical noise*

Replace "IEC 704-1 and IEC 704-2-4" by "EN 60704-1 and EN 60704-2-4".

Add:

The procedure for determination and verifying declared noise emission values is given in EN 60704-3.

Additional subclause:

5.101 *Determination of the maximum spin speed (rpm)*

The maximum spin speed shall be measured with the appliance loaded with the rated capacity as declared by the manufacturer for cotton.

The maximum spin speed shall be determined for the 60° C cotton cycle during the highest spin speed variation which is continuously reached during a period of 60 s. The maximum spin speed is the lowest speed measured during this period.

For the purpose of declaration the measured value shall be rounded off to the nearest 50 rpm.

Additional clause:

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101 Declaration, tolerances and control procedures

101.1 *Washing performance* SIST EN 60456:1998/A11:1998

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101.1.1 *Declaration of the washing performance* SIST EN 60456:1998-a11-1998

Under consideration

101.1.2 *Tolerances and control procedure*

If the result of the test carried out on the first appliance is less than the declared value minus 3%, the test shall be carried out on a further three appliances.

The arithmetical mean of the values of these three appliances shall not be less than the declared value minus 2%.

101.2 *Energy consumption*

The energy consumption measured according to 5.4 and the modifications specified in this amendment shall not be greater than the value declared by the manufacturer plus 15%.

If the result of the test carried out on the first appliance is greater than the declared value plus 15%, the test shall be carried out on a further three appliances.

The arithmetic mean of the values of these three appliances shall not be greater than the declared value plus 10%.

101.3 Water consumption

The water consumption measured according to 5.4 shall not be greater than the value declared by the manufacturer plus 15%.

If the result of the test carried out on the first appliance is greater than the declared value plus 15%, the test shall be carried out on a further three appliances.

The arithmetical mean of the values of these three appliances shall not be greater than the declared value plus 10%.

101.4 Spin speed

The spin speed, determined according to 5.101, shall not be less than the value declared by the manufacturer minus 10% or minus 100 rpm, whichever is the smaller value.

If the result of the test carried out on the first appliance is less than the declared value minus 10% or minus 100 rpm (whichever is the smaller value), the test shall be carried out on a further three appliances.

The value of each of these three appliances shall not be less than the declared value minus 10% or minus 100 rpm, whichever is the smaller value.

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101.5 Water extraction efficiency

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101.5.1 Declaration of the water extraction efficiency

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101.5.2 Tolerances and control procedures

The value of the water extraction efficiency measured according to clause 5.3 of EN 60456:1994 shall not be higher than the value, declared by the manufacturer plus 15% of the declared value.

If the result of the test carried out on the first appliance is higher than the declared value plus 15% of the declared value, the test shall be carried out on a further three appliances.

The arithmetical mean of the values of these three appliances shall not be higher than the declared value plus 10% of the declared value.

101.6 Noise emission

Noise emission values, when declared, shall be measured separately for the washing and spinning part according to EN 60704-2-4 taking into account EN 60704-3.

Annex B

Replace "(informative)" by "(normative)".

Delete the note: "NOTE: - The particulars in this annex ...".

B 1 Specification of characteristics of the reference machine

Replace the second paragraph by the following:

At least once a year calibrate the reference machine according to the user manual (i.e. "Calibration of the reference machines FOM 71 MP and FOM 71 MP/Lab"). Also run a special start-up programme when you have not used the machine for 5 hours.

Delete: Prewash water quantity
Main wash water quantity (total)
Rinse water quantity (total)
Drain time
"hot and" in line: water inlets

Add: Water level accuracy set level \pm 5 mm (\pm 1 l)

Replace in NOTE 1: (FOM 71) by (FOM 71 MP/Lab)

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B2.1.2

Replace the text of this subclause by the following:

Wash equal loads in the reference machine under the same conditions as specified in clause 4 and 5.1. with the corresponding reference programme.