



**SLOVENSKI STANDARD**  
**SIST EN 60456:2001/A12:2002**  
**01-september-2002**

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**Addition of a new reference detergent A\* for the 60 °C washing cycle - Subclause 7.4**

Clothes washing machines for household use - Methods for measuring the performance

Waschmaschinen für den Hausgebrauch - Verfahren zur Messung der Gebrauchseigenschaften

Machines 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 60456:1999/A12:2001**

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**ICS:**

97.060

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**en**

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EUROPEAN STANDARD

**EN 60456/A12**

NORME EUROPÉENNE

EUROPÄISCHE NORM

August 2001

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ICS 97.060

English version

## **Clothes washing machines for household use - Methods for measuring the performance**

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

Waschmaschinen für den Hausgebrauch -  
Verfahren zur Messung der  
Gebrauchseigenschaften

### **iTeh STANDARD PREVIEW**

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This amendment A12 modifies the European Standard EN 60456:1999; it was approved by CENELEC on 2001-07-03. 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**

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## Foreword

This amendment was prepared according to the decision made by the Technical Committee CENELEC TC 59X "Consumer information related to household electrical appliances" at the meeting on 20<sup>th</sup> July 1999. It specifies the new reference detergent CLC A\* to replace the present IEC 60456 reference detergent A.

The text of the draft amendment was submitted to the Unique Acceptance Procedure and was approved by CENELEC as amendment A12 to EN 60456:1999 on 2001-07-03.

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) 2002-02-01
- latest date by which national standards conflicting with the amendment have to be withdrawn (dow) 2004-02-01

## Introduction

The IEC 60456 reference detergent A to be used for testing washing machines according to EN 60456:1999 ran out at the end of 1999 and could no longer be produced. As a consequence, manufacturers have been faced with the problem of being obliged by law to label their washing machines whilst not being in the position to carry out the needed tests due to the lack of the reference detergent required by EN 60456:1999.

Because of missing financing CLC/TC 59X could not carry out an interlaboratory test for approving the new reference detergent A\*. In order to resolve this unacceptable situation CECED, the European manufacturers association, carried out the interlaboratory test (thirteen labs) at their own expense. Having discussed the results of this interlaboratory test at the meeting on 20<sup>th</sup> July 1999, CLC/TC 59X approved the reference detergent A\* (CLC A\*) for the 60 °C cotton programme to replace the IEC 60456 detergent reference (IEC A).

## Scope

This amendment specifies the composition of the new CENELEC reference detergent A\* (CLC A\*) which shall be applied in accordance with the Directive 95/12/EC implementing Council Directive 92/75/EEC with regard to energy labelling of electric washing machines for household use.

It replaces IEC 60456 reference detergent A, which must not be used for the purpose of energy labelling.

### 7.4 Detergent

#### 7.4.1 Replace the first sentence as follows:

The specification for the reference detergents CLC A\* and IEC C are given in 7.4.2 and 7.4.3

**Add** another note as follows:

NOTE 2 The comparability of the test results of the new reference detergent CLC A\* to those of the old IEC 60456 reference detergent A are only guaranteed with regard of the 60 °C washing cycle. However, the new reference detergent CLC A\* can also be used for other test procedures specified in EN 60456, but there is no guarantee concerning comparability of the test results to those of the old detergent A.

7.4.2 **Replace** this subclause and its title by.

7.4.2 **Reference detergent CLC A\***

**Table 2 - Composition of the reference detergent CLC A\***

Ingredient	%	Tolerance ( ± )
Linear sodium alkyl benzene sulfonate	8,8	0,5
Ethoxylated fatty alcohol C <sub>12/14</sub> (7 EO)	4,7	0,3
Sodium soap (tallow soap)	3,2	0,2
Foam inhibitor concentrate (12 % silicon on inorganic carrier)	3,9	0,3
Sodium aluminium silicate zeolite 4 A (80 % active substance)	28,3	1,0
Sodium carbonate	11,6	1,0
Sodium salt of a copolymer from acrylic and maleic acid (granules)	2,4	0,2
Sodium silicate (SiO <sub>2</sub> :Na <sub>2</sub> O = 3,3:1)	3,0	0,2
Carboxymethylcellulose	1,2	0,1
Phosphonate (DEQUEST 2066, 25 % active acid)	2,8	0,2
Optical whitener for cotton (stilbene type)	0,2	0,02
Sodium sulfate	6,5	0,5
Protease (Savinase 8.0)	0,4	0,04
Sodium perborate tetrahydrate	20,0	1
Tetra-acethylethylenediamine (100%)	3,0	0,2

NOTE 1 The reference detergent is distributed in three separate parts:

- basic powder with enzyme and foam inhibitor;
- sodium perborate tetrahydrate;
- Bleach activator tetraacethylen-ethylene-diamine.

The proportions of ingredients of the ready detergent are:

- 77 % basic powder with enzyme and foam inhibitor;
- 20 % sodium perborate tetrahydrate;
- 3 % bleach activator tetraacethyl-ethylene-diamine.

NOTE 2 Due to variability, which may result from the manufacturing procedure of detergent or of its ageing, for comparative measurements, use a reference detergent supplied by a single manufacturer from a recent production batch is recommended. It is also recommended that the detergent and perborate be kept separately in small quantities (e.g. 1 kg) and used within a limited time.

NOTE 3 It is recommended that the detergent manufacturer should indicate the pH of the product supplied. Further product specifications are under consideration.

NOTE 4 The ingredients shall be thoroughly mixed prior to the use. The maximum storage time after mixing is seven days.

NOTE 5 The amount of detergent is determined according to the following formula:  
Amount = 54 g + 16 g/kg of **rated capacity**

NOTE 6 If a prewash is to be included, the total quantity of detergent used shall be 1,25 times the figures above. The total detergent quantity is to be split between prewash and main wash in accordance with the manufacturer's instructions. If there are no instructions, the split shall be 1 : 2 for prewash : main wash.

NOTE 7 Information about analytical methods for checking the component of the detergent are available from the wfk web-site: [www.testgewebe.de](http://www.testgewebe.de)

The deadline for the use of the new detergent CLC A\* and the storage conditions shall be given by the manufacturer when supplied. If no deadline for the use of the detergent is given it shall be used within one year of production.

**Annex A**

**Table A.2** Replace the first line in part “Main wash”

“Dosage reference detergent A” by “Dosage reference detergent CLC A\*”

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