SLOVENSKI STANDARD
SIST EN 60734:2013

01-januar-2013

Gospodinjski električni aparati - Lastnosti - Trda voda za preskušanje

Household electrical appliances - Performance - Hard water for testing

Elektrische Geräte für den Hausgebrauch - Gebrauchseigenschaften - Hartes Wasser für Prüfungen

Appareils électrodomestiques - Aptitude à la fonction - Eau dure pour les essais

Ta slovenski standard je istoveten z: **EN 60734:2012**

ICS:

97.060	Aparati za nego perila	Laundry appliances

SIST EN 60734:2013 **en**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 60734

September 2012

ICS 97.060

Supersedes EN 60734:2003

English version

Household electrical appliances - Performance - Water for testing

(IEC 60734:2012)

Appareils électrodomestiques - Aptitude à la fonction - Eau pour les essais (CEI 60734:2012)

Elektrische Geräte für den Hausgebrauch - Gebrauchseigenschaften - Wasser für Prüfungen (IEC 60734:2012)

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This European Standard 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 CEN-CENELEC Management Centre has the same status as the official versions.

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CENELEC

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

Management Centre: Avenue Marnix 17, B - 1000 Brussels

Ref. No. EN 60734:2012 E

Foreword

The text of document 59D/398/FDIS, future edition 4 of IEC 60734, prepared by SC 59D, Home laundry appliances, of IEC TC 59, Performance of household and similar electrical appliances was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 60734:2012.

The following dates are fixed:

• latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement	(dop)	2013-05-01
• latest date by which the national standards conflicting with the document have to be withdrawn	(dow)	2015-08-01

This document supersedes EN 60734:2003.

EN 60734:2012 includes the following significant technical changes with respect to EN 60734:2003:

a) four types of standard water, from soft to very hard, are defined with specification for hardness**,** **alkalinity** and **conductivity**;

b) preparation method A is no longer maintained; and

c) method C3 is added to prepare water of specified hardness, **conductivity** and **alkalinity** starting with natural water while the natural water based methods C1 and C2 focus on **water hardness** only, without allowing control or setting of **alkalinity** and **conductivity**.

Words in **bold** in the text are defined in Clause 3.

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Endorsement notice

The text of the International Standard IEC 60734:2012 was approved by CENELEC as a European Standard without any modification.

Annex ZA
(normative)

Normative references to international publications with their corresponding European publications

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

NOTE When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

Publication	Year	Title	EN/HD	Year
ISO 6059	-	Water quality - Determination of the sum of calcium and magnesium - EDTA titrimetric method	-	-
ISO 7888	-	Water quality - Determination of electrical conductivity	EN 27888	-
ISO 9963-1	-	Water quality - Determination of alkalinity - Part 1: Determination of total and composite alkalinity	EN ISO 9963-1	-
ISO 10523	-	Water quality - Determination of pH	EN ISO 10523	-

IEC 60734

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INTERNATIONAL STANDARD

NORME INTERNATIONALE

Household electrical appliances – Performance – Water for testing

Appareils électrodomestiques – Aptitude à la fonction – Eau pour les essais

INTERNATIONAL ELECTROTECHNICAL COMMISSION

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

HOUSEHOLD ELECTRICAL APPLIANCES – PERFORMANCE – WATER FOR TESTING

FOREWORD

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International standard IEC 60734 has been prepared by subcommittee 59D: Home laundry appliances, of IEC Technical Committee 59: Performance of household and similar electrical appliances.

This fourth edition cancels and replaces the third edition published in 2001. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

a) four types of standard water, from soft to very hard, are defined with specification for hardness**, alkalinity** and **conductivity**;
b) preparation method A is no longer maintained; and
c) method C3 is added to prepare water of specified hardness, **conductivity** and **alkalinity** starting with natural water while the natural water based methods C1 and C2 focus on **water hardness** only, without allowing control or setting of **alkalinity** and **conductivity**.

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

FDIS	Report on voting
59/398/FDIS	59/399/RVD

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

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

Words in **bold** in the text are defined in Clause 3.

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC web site under "http://webstore.iec.ch" in the data related to the specific publication. At this date, the publication will be

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

INTRODUCTION

This publication specifies water qualities with regard to hardness, **alkalinity** and **conductivity** and describes several methods to prepare water to be used for testing household appliances in cases where the water quality is important for the reproducibility of the test results. The described methods allow the preparation of water complying with all three target requirements (hardness, **alkalinity**, **conductivity**), or just hardness – depending on the requirements set out in the referring appliance test method.

Compared to the third edition of IEC 60734 (2001), method A is no longer maintained and another method, method C3, is added.

Method B is used to prepare water of the correct **total hardness**. Preparation starts with demineralised water in which hardening salts are dissolved. It will give water specified temporary as well as **permanent hardness**, whilst complying with the specifications for **alkalinity** and **conductivity**.

Method C1 starts with natural water with higher hardness than required, while method C2 starts with soft natural water, which is hardened. Depending on the composition of the natural water, several other ions might be present. Restrictions regarding the amounts are given for some ions, which may influence the cleaning results when testing washing machines and dishwashers. No specification regarding **temporary** and **permanent hardness** is given.

The development of method C3 appreciates the need for water of specified **conductivity** and **alkalinity** for testing the performance of tumble dryers. While synthetic method B meets this need, the natural water based methods C1 and C2 focus on **water hardness** only without allowing control or setting of **alkalinity** and **conductivity**. The new method C3, which starts with natural water, fills that gap.