

Household electrical appliances — Performance — Hard water for testing

The European Standard EN 60734:2003 has the status of a
British Standard

ICS 97.030

National foreword

This British Standard is the official English language version of EN 60734:2003. It is identical with IEC 60734:2001. It supersedes BS EN 60734:1993 which will be withdrawn on 2005-12-01.

The UK participation in its preparation was entrusted by Technical Committee CPL/59, Performance of household electrical appliances, to Subcommittee CPL/59/1, Dishwashers, which has the responsibility to:

- aid enquirers to understand the text;
- present to the responsible international/European committee any enquiries on the interpretation, or proposals for change, and keep the UK interests informed;
- monitor related international and European developments and promulgate them in the UK.

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English version

**Household electrical appliances –
Performance –
Hard water for testing
(IEC 60734:2001)**

Appareils électrodomestiques –
Aptitude à la fonction –
Eau dure pour les essais
(CEI 60734:2001)

Elektrische Geräte für den Hausgebrauch -
Gebrauchseigenschaften –
Hartes Wasser für Prüfungen
(IEC 60734:2001)

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CENELEC

European Committee for Electrotechnical Standardization
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Foreword

The text of the International Standard IEC 60734:2001, prepared by SC 59D, Home laundry appliances, of IEC TC 59, Performance of household electrical appliances, was submitted to the CENELEC Unique Acceptance Procedure and was approved by CENELEC as EN 60734 on 2002-12-01 without any modification.

This European Standard supersedes EN 60734:1993.

The following dates were fixed:

- latest date by which the EN has to be implemented
at national level by publication of an identical
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- latest date by which the national standards conflicting
with the EN have to be withdrawn (dow) 2005-12-01

Annexes designated "normative" are part of the body of the standard.

Annexes designated "informative" are given for information only.

In this standard, Annex B is normative and Annexes A and C are informative.

Endorsement notice

The text of the International Standard IEC 60734:2001 was approved by CENELEC as a European Standard without any modification.

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INTRODUCTION

This publication describes several methods to prepare water of standardised hardness to be used for testing household appliances in cases where the water quality is important for the reproducibility of the test results.

It is based on the second edition of IEC 60734, which describes two methods, A and B, of preparing water of three different water hardnesses. Experiences from application of the methods have shown that they are unnecessarily rigid for some purposes and thus expensive or not suited for the preparation of large quantities of water. Furthermore the hardness given is not in line with those stated in some performance standards. Complementary methods C1 and C2 have been developed to be used in such cases. These allow the use of natural instead of demineralised water.

Method A is used to prepare hard water of the correct total hardness. Preparation starts with demineralised water in which hardening salts are dissolved by bubbling carbon dioxide through the mixture.

Method B involves preparation in a similar way but with other salts, which are soluble without addition of carbon dioxide. This method will result in excessive amounts of some ions compared to method A. Both methods give water with specified temporary as well as permanent hardness.

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.