# INTERNATIONAL STANDARD

# IEC 60704-2-3

Second edition 2001-12

Household and similar electrical appliances – Test code for the determination of airborne acoustical noise –

Part 2-3: Particular requirements for dishwashers

Appareils électrodomestiques et analogues – Code d'essai pour la détermination du bruit aérien –

Partie 2-3: Règles particulières pour les lave-vaisselle

© IEC 2001 — Copyright - all rights reserved

No part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from the publisher.

International Electrotechnical Commission3, rue de Varembé Geneva, SwitzerlandTelefax: +41 22 919 0300e-mail: inmail@iec.chIEC web site http://www.iec.ch



Commission Electrotechnique Internationale International Electrotechnical Commission Международная Электротехническая Комиссия



Ν

For price, see current catalogue

– 2 –

60704-2-3 © IEC:2001(E)

## CONTENTS

FO	REWORD		
INT	RODUCTION		
1	Scope and object6		
2	Normative references		
3	Terms and definitions		
4	Measurement methods and acoustical environments		
5	Instrumentation		
6	Operation and location of appliances under test		
7	Measurement of sound pressure levels		
8	Calculation of sound pressure and sound power levels		
9	Information to be recorded		
10	Information to be reported		
Anr	Annex A (normative) Standard test table		
	liography14		
Fig	ure 101 – Test enclosure		

60704-2-3 © IEC:2001(E)

- 3 -

## INTERNATIONAL ELECTROTECHNICAL COMMISSION

## HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES – TEST CODE FOR THE DETERMINATION OF AIRBORNE ACOUSTICAL NOISE –

#### Part 2-3: Particular requirements for dishwashers

## FOREWORD

- 1) The IEC (International Electrotechnical Commission) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of the IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic tields. To this end and in addition to other activities, the IEC publishes International Standards. Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. The IEC collaborates closely with the International Organization (ISO) in accordance with conditions determined by agreement between the two organizations.
- 2) The formal decisions or agreements of the IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested National Committees.
- 3) The documents produced have the form of recommendations for international use and are published in the form of standards, technical specifications, technical reports or guides and they are accepted by the National Committees in that sense.
- 4) In order to promote international unification, IEC National Committees undertake to apply IEC International Standards transparently to the maximum extent possible in their national and regional standards. Any divergence between the IEC Standard and the corresponding national or regional standard shall be clearly indicated in the latter.
- 5) The IEC provides no marking procedure to indicate its approval and cannot be rendered responsible for any equipment declared to be in conformity with one of its standards.
- 6) Attention is drawn to the possibility that some of the elements of this International Standard may be the subject of patent rights. The EC shall not be held responsible for identifying any or all such patent rights.

International Standard IEC 60704-2-3 has been prepared by subcommittee 59A: Electric dishwashers, of IEC technical committee 59: Performance of household electrical appliances.

This second edition cancels and replaces the first edition published in 1987 and constitutes a technical revision.

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

FDIS	Report on voting
59A/103/FDIS	59A/106/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 3.

This Part 2-3 is intended to be used in conjunction with IEC 60704-1, 2nd edition 1997: Household and similar electrical appliances – Test code for the determination of airborne acoustical noise – Part 1: General requirements.

- 4 -

60704-2-3 © IEC:2001(E)

The relevant text of Part 1 as amended by this publication establishes the test code for dishwashers.

This Part 2-3 supplements or modifies the corresponding clauses in IEC 60704-1:1997. When a particular subclause of Part 1 is not mentioned in this Part 2, that subclause is applicable as far as reasonable. Where this standard states "addition", "modification" or "replacement", the relevant requirements, test specifications or explanatory matter in Part 1 should be adapted accordingly.

Subclauses or figures, which are additional to those in Part 1 are numbered starting from 101. Additional annexes are lettered AA, BB, etc.

The committee has decided that the contents of this publication will remain unchanged until 2003. At this date, the publication will be

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

60704-2-3 © IEC:2001(E)

- 5 -

## INTRODUCTION

The measuring conditions specified in this Part 2-3 provide for sufficient accuracy in determining the noise emitted, and comparing the results of measurements taken by different laboratories, whilst simulating as far as possible the practical use of dishwashers.

To avoid unsteadiness caused by foaming, the tests are carried out with unsoiled loads and without detergents or rinsing aids.

It is recommended to consider the determination of noise levels as part of a comprehensive testing procedure covering many aspects of properties and performance of dishwashers.

Compared to the first edition (1987) of this Part 2, the second edition additionally considers the noise of water supply, drainage, pre-wash and intermediate rinse. Therefore the operating conditions during these operations shall be observed carefully.

NOTE As stated in the introduction to IEC 60704-1, this test code is concerned with airborne poise only.

- 6 -

## HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES – TEST CODE FOR THE DETERMINATION OF AIRBORNE ACOUSTICAL NOISE –

Part 2-3: Particular requirements for dishwashers

## 1 Scope and object

This clause of Part 1 is applicable except as follows:

#### 1.1 Scope

#### 1.1.1 General

#### Replacement:

These particular requirements apply to single-unit electric dishwashers for household and similar use, with or without automatic programme control, for cold and/or hot water supply, for detachable or permanent connection to water supply or sewage systems, intended for placing on the floor against a wall, for building in or placing under a counter, a kitchen worktop or under a sink, for wall-mounting or on a counter.

Limitations for the use of this test code are given in 1.1.1 of IEC 60704-1.

#### 1.1.2 Types of noise

Replacement:

ISO 3743-1, ISO 3743-2 and ISO 3744 can be used for measuring noise emitted by dishwashers.

#### 1.1.3 Size of the source

#### Replacement

The method specified in ISO 3744 is applicable to noise sources of any size. When applying ISO 3743-1 and ISO 3743-2, care should be taken that the maximum size of the dishwasher under test fulfils the requirements specified in 1.3 of ISO 3743-1 and ISO 3743-2.

#### 1.2 Object

Addition:

Requirements for the declaration of noise emission values are not within the scope of this standard.

NOTE For determining and verifying noise emission values declared in product specifications, see IEC 60704-3.

#### 2 Normative references

This clause of Part 1 is applicable

NOTE See bibliography at the end of the text.