

INTERNATIONAL STANDARD

NORME INTERNATIONALE

**Household and similar electrical appliances - Test code for the determination of airborne acoustical noise -
Part 2-20: Particular requirements for wet hard floor cleaning appliances**

**Appareils électrodomestiques et analogues - Code d'essai pour la détermination du bruit aérien -
Partie 2-20: Exigences particulières pour les appareils de nettoyage des sols durs et mouillés**



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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**Household and similar electrical appliances -
Test code for the determination of airborne acoustical noise -
Part 2-20: Particular requirements for wet hard floor cleaning appliances**

FOREWORD

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IEC 60704-2-20 has been prepared by subcommittee 59F: Surface cleaning appliances, of IEC technical committee 59: Performance of household and similar electrical appliances. It is an International Standard.

The text of this International Standard is based on the following documents:

Draft	Report on voting
59F/547/FDIS	59F/556/RVD

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

The language used for the development of this International Standard is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/publications.

This document is intended to be used in conjunction with IEC 60704-1:2021, *Household and similar electrical appliances - Test code for the determination of airborne acoustical noise – Part 1: General requirements*.

The relevant text of IEC 60704-1:2021 as amended by this document establishes the test code for **wet hard floor cleaners**.

This document supplements or modifies the corresponding clauses in IEC 60704-1:2021. When a particular subclause of IEC 60704-1:2021 is not mentioned in this document, 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 IEC 60704-1:2021 should be adapted accordingly.

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

Unless notes are in a new subclause or involve notes in Part 1, they are numbered starting from 101, including those in a replaced clause or subclause.

In this standard, the following print types are used:

- terms defined in Clause 3: bold type.

A list of all parts in the IEC 60704 series, published under the general title *Household and similar electrical appliances - Test code for the determination of airborne acoustical noise*, can be found on the IEC website.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under webstore.iec.ch in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn, or
- revised.

INTRODUCTION

The measuring conditions specified in this document 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 **wet hard floor cleaners**.

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 household **wet hard floor cleaners**.

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

Sample Document

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1 Scope

Addition:

This document specifies the determination of airborne acoustical noise of mains operated and cordless wet hard floor cleaning appliances for household or similar use. In the case of appliances with combined functionality, this document only addresses the wet cleaning functionality.

This document does not apply to wet hard floor cleaning appliances for industrial or professional purposes and robotic wet hard floor cleaning appliances.

NOTE 101 This document is not intended for cleaning appliances according to IEC 60335-2-79, IEC 60704-2-1, IEC 60704-2-17.

This document describes the determination of the noise emission of **wet hard floor cleaners** under normal operating conditions on hard floor in accordance with 4.6 of IEC/ASTM 62885-6:2023.

NOTE 102 For determining and verifying noise emission values declared in product specifications, see IEC 60704-3.

2 Normative references

Addition:

IEC/ASTM 62885-6:2023, *Surface cleaning appliances - Part 6: Wet hard floor cleaning appliances for household and similar use - Methods for measuring the performance*

3 Terms and definitions

Addition:

3.101

wet hard floor cleaner

electrically operated appliance that removes wet or dry stains and soils (e.g. beverage and food stains, floor grime, etc.) from a hard floor surface to be cleaned by use of water alone, a detergent solution mix, or use of steam, and can employ an air flow created by a vacuum developed within the unit, the removed material being separated in the appliance and the cleaned suction air being returned to the ambient air

[SOURCE: IEC/ASTM 62885-6:2023, 3.1]

3.102

cordless wet hard floor cleaner

wet hard floor cleaner that is not mains-operated

Note 1 to entry: The term "cordless" is equivalent to "battery-operated" throughout the document.

[SOURCE: IEC/ASTM 62885-6:2023, 3.2]

3.103

steam cleaner

wet hard floor cleaner that uses steam, and generally employs a soft absorbent pad to transfer hot moisture to the floor surface and to absorb and remove the stains and soils

[SOURCE: IEC/ASTM 62885-6:2023, 3.3]

3.104

cleaning head

plain nozzle, pad, or brush attached to a **wet hard floor cleaner** that is applied to a surface to be cleaned

[SOURCE: IEC/ASTM 62885-6:2023, 3.4]

3.105

active nozzle

cleaning head provided with a driven agitation device to assist stain or soil removal

[SOURCE: IEC/ASTM 62885-6:2023, 3.5]

3.106

standard hard floor

part of the floor on which the **wet hard floor cleaner** and its **cleaning head** is placed for the measurement

4 Measurement methods and acoustical environments

4.2 Direct method

Addition:

If audible discrete tones are present in the noise emitted by the source, the estimated standard deviation of the measured sound pressure levels in the special reverberation room can increase. In such cases additional microphone positions or source positions can be necessary, as specified in ISO 3743-2.

If an operator is necessary, it is considered as part of the test environment. Therefore, the operator shall be present also during the reverberation time measurement with the RSS. The position of the operator shall be approximately at the same position as in the measurement with the test sample.

4.3 Comparison method

Addition:

If audible discrete tones are present in the noise emitted by the source, the estimated standard deviation of the measured sound pressure levels in the hard-walled test room or in the special reverberation room can increase. In such cases, additional microphone positions or source positions can be necessary, as specified in ISO 3743-1 or ISO 3743-2.

If an operator is necessary, it is considered as part of the test environment. Therefore, the operator shall be present also during the comparison measurement with the RSS. The position of the operator shall be approximately at the same position as in the measurement with the test sample.

4.4 Acoustical environment

4.4.1 General requirements and criterion for adequacy of the test environment

Addition:

The methods specified in ISO 3743-1, ISO 3743-2 and ISO 3744 can be used for measuring noise emitted by **wet hard floor cleaners**.

4.5 Measurement uncertainties

4.5.2 Standard deviations on repeatability and reproducibility and standard deviations related to declaration and verification

Replacement:

For **wet hard floor cleaners** the estimated values of standard deviations of sound power levels determined in accordance with this document are provided in Table 1.

Table 1 – Standard deviations of sound power levels

Standard deviation (dB)	
σ_r (repeatability)	σ_R (reproducibility)
0,5	1,0

NOTE The values are derived from the results of a round robin test (RRT) conducted in 2025 with 6 different **wet hard floor cleaners** in 10 participating laboratories.

For the purpose of determining and verifying declared noise emission values for **wet hard floor cleaners**, in accordance with IEC 60704-3, the following values provided in Table 2 apply:

Table 2 – Standard deviations for declaration and verification

Standard deviation (dB)		
σ_P (production)	σ_t (total)	σ_M (reference)
1,0 to 1,7	1,3 to 2,0	2,0

NOTE 101 The values of standard deviations in Table 2 are not verified and under further consideration.

5 Instrumentation

5.1 Instrumentation for measuring acoustical data

Addition:

The use of windscreens is recommended. If necessary, the observed sound pressure level shall be corrected for changes in the microphone sensitivity, in accordance with the instructions accompanying the instrumentation.