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colour inside

This extended version of IEC 60704-2-9:2024 includes the content of the references made to IEC 60704-1:2021

Household and similar electrical appliances – Test code for the determination of airborne acoustical noise – Part 2-9: Particular requirements for electric hair care appliances

INTERNATIONAL ELECTROTECHNICAL COMMISSION

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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

Part 2-9: Particular requirements for electric hair care appliances

FOREWORD

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This extended version (EXV) of the official IEC Standard provides the user with the comprehensive content of the Standard.

IEC 60704-2-9:2024 EXV includes the content of IEC 60704-2-9:2024, and the references made to IEC 60704-1:2021.

The specific content of IEC 60704-2-9:2024 is displayed on a blue background.

IEC 60704-2-9 has been prepared by subcommittee 59L: Small household appliances, of IEC technical committee 59: Performance of household electrical appliances. It is an International Standard.

This second edition cancels and replaces the first edition published in 2003. This edition constitutes a technical revision.

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

a) Alignment with IEC 60704-1:2021.

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

Draft	Report on voting
59L/239/CDV	59L/253/RVC

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.

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.

This part 2-9 is intended to be used in conjunction with the fourth edition of 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 standard establishes the test code for electric hair care appliances.

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 applies as far as reasonable. Where this standard states "addition", "modification" or "replacement", the relevant requirements, test specification or explanatory matter in IEC 60704-1:2021 is adapted accordingly.

Subclauses or figures which are additional to those in IEC 60704-1:2021 are numbered starting from 101. Additional annexes are lettered AA, BB, etc.

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INTRODUCTION to 60704-1:2021

Although the noise emitted by household appliances does not generally present a hazard to the hearing of the operator and other exposed persons, the need for standardization procedures for the determination of the noise emitted has been recognized for a long time. Such procedures should be specified, not only for special types of appliances, but also the principles should be applicable to the majority of appliances in general use.

Generally, the determination of noise levels is only part of a comprehensive testing procedure covering many aspects of the properties and performances of the appliance. It is therefore important that the requirements for noise measurements (such as test environment, instrumentation, and amount of labour involved) be kept at a modest level.

The results of noise measurements are used for many purposes, for example for noise declaration, as well as for comparing the noise emitted by a specific appliance to the noise emitted by other appliances of the same family. In other cases, the results are taken as a basis for engineering action in the development stages of new pieces of equipment, or in deciding on means for sound insulation. For all purposes, it is important to specify procedures with known accuracy so that the results of measurements taken by different laboratories can be compared.

These conditions have, as far as possible, been taken into account in the preparation of this test code. The acoustic measuring methods are based on those described in ISO 3743-1:2010, ISO 3743-2:2018 and ISO 3744:2010.

The adoption of these methods permits the use of hemi-anechoic rooms, special reverberation test rooms and hard-walled test rooms. The result of the measurements is the sound power level of the appliance. Within the measuring uncertainty specific to these methods, the results from the determination under free field conditions over a reflecting plane are equal to those obtained in reverberant fields.

The use of intensity methods as described in ISO 9614-1:1993, ISO 9614-2:1996, and ISO 9614-3:2002 is applicable under special conditions, which are described in specific parts of the IEC 60704-2 series.

This test code is concerned with airborne noise only. In some cases, structure-borne noise, for example transmitted to the adjoining room, can be of importance.

INTRODUCTION to 60704-2-9:2024

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 hair care appliances.

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

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

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

Part 1: General requirements

1 Scope

This part of IEC 60704 applies to electric hand-held hairdryers for household and similar use supplied from mains, which operate with a flow of air.

These particular requirements can also be applied to analogous electrically operated devices such as hairstyling appliances, which produce the airflow by a fan.

Helmet-type hairdryers are excluded from this document.

This document does not apply to hair care appliances with radiant heating.

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

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 60704-2 (all parts), *Household and similar electrical appliances – Test code for the determination of airborne acoustical noise*

IEC 60704-3:2019, *Household and similar electrical appliances – Test code for the determination of airborne acoustical noise – Part 3: Procedure for determining and verifying declared noise emission values*

IEC 61260-1:2014, *Electroacoustics – Octave-band and fractional-octave-band filters – Part 1: Specifications*

IEC 61672-1:2013, *Electroacoustics – Sound level meters – Part 1: Specifications*

ISO 3743-1:2010, *Acoustics – Determination of sound power levels of noise sources – Engineering methods for small, movable sources in reverberant fields – Part 1: Comparison method for hard-walled test rooms*

ISO 3743-2:2018, *Acoustics – Determination of sound power levels of noise sources using sound pressure – Engineering methods for small, movable sources in reverberant fields – Part 2: Methods for special reverberation test rooms*

ISO 3744:2010, *Acoustics – Determination of sound power levels of noise sources using sound pressure – Engineering method in an essentially free field over a reflecting plane*

ISO 9614-1:1993, *Acoustics – Determination of sound power levels of noise sources using sound intensity – Part 1: Measurement at discrete points*

ISO 9614-2:1996, *Acoustics – Determination of sound power levels of noise sources using sound intensity – Part 2: Measurement by scanning*

ISO 9614-3:2002, *Acoustics – Determination of sound power levels of noise sources using sound intensity – Part 3: Precision method for measurement by scanning*

ISO 6926:2016, *Acoustics – Requirements for the performance and calibration of reference sound sources used for the determination of sound power levels*

ISO 12001:1996, *Acoustics – Noise emitted by machinery and equipment – Rules for the drafting and presentation of a noise test code*

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INTERNATIONAL STANDARD

NORME INTERNATIONALE

Household and similar electrical appliances – Test code for the determination of airborne acoustical noise –
Part 2-9: Particular requirements for electric hair care appliances

Appareils électrodomestiques et analogues – Code d'essai pour la détermination du bruit aérien –
Partie 2-9: Exigences particulières pour les appareils électriques destinés aux soins des cheveux



IEC 60704-2-9:2024-06(en-fr)

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Part 2-9: Particular requirements for electric hair care appliances

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- 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 hair care appliances.

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

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

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

Part 2-9: Particular requirements for electric hair care appliances

1 Scope

Replacement:

This part of IEC 60704 applies to electric hand-held hairdryers for household and similar use supplied from mains, which operate with a flow of air.

These particular requirements can also be applied to analogous electrically operated devices such as hairstyling appliances, which produce the airflow by a fan.

Helmet-type hairdryers are excluded from this document.

This document does not apply to hair care appliances with radiant heating.

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

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COMMISSION ÉLECTROTECHNIQUE INTERNATIONALE

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APPAREILS ÉLECTRODOMESTIQUES ET ANALOGUES – CODE D'ESSAI POUR LA DÉTERMINATION DU BRUIT AÉRIEN –

Partie 2-9: Exigences particulières pour les appareils électriques destinés aux soins des cheveux

AVANT-PROPOS

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L'IEC 60704-2-9 a été établie par le sous-comité 59L: Petits appareils domestiques, du comité d'études 59 de l'IEC: Aptitude à la fonction des appareils électrodomestiques et analogues. Il s'agit d'une Norme internationale.

Cette deuxième édition annule et remplace la première édition parue en 2003. Cette édition constitue une révision technique.

Cette édition inclut les modifications techniques majeures suivantes par rapport à l'édition précédente:

a) Alignement sur l'IEC 60704-1:2021.

Le texte de cette Norme internationale est issu des documents suivants:

Projet	Rapport de vote
59L/239/CDV	59L/253/RVC

Le rapport de vote indiqué dans le tableau ci-dessus donne toute information sur le vote ayant abouti à son approbation.

La langue employée pour l'élaboration de cette Norme internationale est l'anglais.

Ce document a été rédigé selon les Directives ISO/IEC, Partie 2, il a été développé selon les Directives ISO/IEC, Partie 1 et les Directives ISO/IEC, Supplément IEC, disponibles sous www.iec.ch/members_experts/refdocs. Les principaux types de documents développés par l'IEC sont décrits plus en détail sous www.iec.ch/publications/.

Une liste de toutes les parties de la série IEC 60704, publiées sous le titre général *Appareils électrodomestiques et analogues – Code d'essai pour la détermination du bruit aérien*, se trouve sur le site web de l'IEC.

Cette partie 2-9 est destinée à être utilisée conjointement avec la quatrième édition de l'IEC 60704-1:2021: *Appareils électrodomestiques et analogues – Code d'essai pour la détermination du bruit aérien – Partie 1: Exigences générales*.

Le texte correspondant de l'IEC 60704-1:2021, modifié par la présente norme, constitue le code d'essai pour les appareils électriques destinés aux soins des cheveux.

Le présent document complète ou modifie les articles correspondants de l'IEC 60704-1:2021. Lorsqu'un paragraphe particulier de l'IEC 60704-1:2021 n'est pas mentionné dans ce document, ce paragraphe s'applique pour autant qu'il soit raisonnable. Lorsque la présente norme spécifie "addition", "modification" ou "remplacement", les exigences, modalités d'essai ou commentaires correspondants de l'IEC 60704-1:2021 sont adaptés en conséquence.

Les paragraphes ou les figures qui s'ajoutent à ceux de l'IEC 60704-1:2021 sont numérotés à partir de 101. Les annexes complémentaires sont appelées AA, BB, etc.

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- révisé.

INTRODUCTION

Les conditions de mesure spécifiées dans le présent document assurent une exactitude suffisante pour la détermination du bruit émis et lors de la comparaison des résultats des mesures dans différents laboratoires, tout en reproduisant, dans la mesure du possible, l'utilisation pratique des appareils destinés aux soins des cheveux.

Il est recommandé de considérer la détermination des niveaux de bruit comme faisant partie d'une procédure d'essais d'ensemble couvrant de nombreux aspects des propriétés et de l'aptitude à la fonction des appareils électriques destinés aux soins des cheveux.

NOTE Comme indiqué dans l'introduction de l'IEC 60704-1, le présent code d'essai concerne uniquement le bruit aérien.

APPAREILS ÉLECTRODOMESTIQUES ET ANALOGUES – CODE D'ESSAI POUR LA DÉTERMINATION DU BRUIT AÉRIEN –

Partie 2-9: Exigences particulières pour les appareils électriques destinés aux soins des cheveux

1 Domaine d'application

Remplacement:

La présente partie de l'IEC 60704 s'applique aux sèche-cheveux électriques tenus à la main pour usages domestiques et analogues, alimentés à partir du réseau et fonctionnant avec un flux d'air.

Ces exigences particulières peuvent également s'appliquer aux appareils électriques analogues tels que les appareils de coiffure dont le flux d'air est produit par un ventilateur.

Les casques sèche-cheveux sont exclus du présent document.

Le présent document ne s'applique pas aux appareils destinés aux soins des cheveux à chauffage rayonnant.

Pour la détermination et la vérification des valeurs d'émission sonore déclarées dans les spécifications de produit, voir l'IEC 60704-3.