
**Acoustics — Screens, furniture and
single objects intended for interior
use — Rating of sound absorption and
sound reduction of elements based on
laboratory measurements**

*Acoustique — Meubles, écrans et objets uniques destinés à usage
intérieur — Note de l'absorption acoustique et de réduction
acoustique des éléments basée sur des mesures en laboratoire*



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Published in Switzerland

Contents

Page

Foreword	iv
Introduction	v
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Methods to measure and evaluate various interior acoustic products	3
4.1 Single objects	3
4.1.1 General	3
4.1.2 Single object sound absorption	3
4.2 Desk screens	4
4.3 Floor screens	4
4.3.1 General	4
4.3.2 Floor screen sound absorption	4
4.3.3 Floor screen sound attenuation	4
4.3.4 Floor screen sound insulation	4
4.4 Furniture ensembles	5
4.4.1 General	5
4.4.2 Furniture ensembles sound absorption	5
4.5 Single objects that are tightly connected to form a surface greater than or equal to 10 m ²	5
4.6 Other single objects	5
5 Statement of results	5
5.1 Results for sound absorption	5
5.2 Results for floor screen sound attenuation	5
5.3 Results for sound insulation	6
5.4 Other information to be reported	6
Annex A (normative) Presentation of equivalent sound absorption area	7
Annex B (normative) Examples for the deduction of object sound absorption coefficient, α_{obj}	9
Annex C (normative) Presentation of floor screen sound attenuation	14
Annex D (normative) Presentation of screen sound insulation	15
Annex E (normative) Mounting conditions in the laboratory	17
Annex F (informative) Guidelines on suitable values for sound insulation for different screen heights	27
Bibliography	28

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation on the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 43, *Acoustics*, Subcommittee SC 2, *Building acoustics*.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

The interior design industry is progressing rapidly, and the acoustic characteristics of products have become an important technical aspect in the design of new products. Currently, interior design products are generally not well defined in terms of their acoustic characteristics, often leading to confusing and misleading product specifications and marketing materials. Further, it is often unclear how a product's reported acoustic characteristics are to be applied to determine its acoustic impact in a furnished room.

This document is intended to clarify the acoustic characteristics, and their application, for various interior design products. This is accomplished by a standardized test methodology for the measurement of sound absorption, and defining when an interior product is to be considered as a single object.

This document is intended to facilitate the measurement and evaluation procedure for any interior product currently on the market. By using it, different interior design products can be compared to each other in an equal manner. Additionally, product acoustic characteristics evaluated according to this document can be applied for room acoustic modelling and calculations.

Acoustics — Screens, furniture and single objects intended for interior use — Rating of sound absorption and sound reduction of elements based on laboratory measurements

1 Scope

This document specifies how screens, furniture and single objects intended for interior use are assessed with regard to sound absorption and specifies the evaluation of sound attenuation for floor screens. It also specifies under which circumstances various interior products for offices, schools and other public spaces are considered as plane absorbers or as discrete single objects. A product considered as a single object and intended for interior use is measured according to ISO 354 and evaluated by its equivalent sound absorption area or object sound absorption coefficient in octave bands. This document defines interior products and single objects and it comprises additional information regarding measurements and assessment of single objects.

The sound absorption as specified in this document can be used to calculate:

- a) reverberation time characteristics in rooms;
- b) room acoustic parameters using ray tracing software.

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.

ISO 354:2003, *Acoustics — Measurement of sound absorption in a reverberation room*

ISO 717-1:2013, *Acoustics — Rating of sound insulation in buildings and of building elements — Part 1: Airborne sound insulation*

ISO 10053, *Acoustics — Measurement of office screen sound attenuation under specific laboratory conditions*

ISO 10140-2, *Acoustics — Laboratory measurement of sound insulation of building elements — Part 2: Measurement of airborne sound insulation*

ISO 11654:1997, *Acoustics — Sound absorbers for use in buildings — Rating of sound absorption*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <http://www.electropedia.org/>

3.1

interior acoustic product

object aimed for insertion loss and/or absorption of indoor sound