
Akustika - Absorberji zvoka za uporabo v stavbah - Vrednotenje zvočne absorpcije
(ISO 11654:1997)

Acoustics - Sound absorbers for use in buildings - Rating of sound absorption (ISO 11654:1997)

Akustik - Schallabsorber für die Anwendung in Gebäuden - Bewertung der Schallabsorption (ISO 11654:1997)

Acoustique - Absorbants pour l'utilisation dans les bâtiments - Evaluation de l'absorption acoustique (ISO 11654:1997)

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91.120.20	Akustika v stavbah. Zvočna izolacija	Acoustics in building. Sound insulation
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CEN

European Committee for Standardization
Comité Européen de Normalisation
Europäisches Komitee für Normung

Central Secretariat: rue de Stassart, 36 B-1050 Brussels

EN ISO 11654 : 1997**Foreword**

The text of the International Standard ISO 11654:1997 has been prepared by Technical Committee ISO/TC 43 "Acoustics" in collaboration with Technical Committee CEN/TC 126 "Acoustic properties of building products and of buildings", the secretariat of which is held by AFNOR.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by October 1997, and conflicting national standards shall be withdrawn at the latest by October 1997.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

Endorsement notice

The text of the International Standard ISO 11654:1997 was approved by CEN as a European Standard without any modification.

NOTE: Normative references to International Standards are listed in annex ZA (normative).

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Acoustics — Sound absorbers for use in buildings — Rating of sound absorption

*Acoustique — Absorbants pour l'utilisation dans les bâtiments —
Évaluation de l'absorption acoustique*

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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.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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International Standard ISO 11654 was prepared by Technical Committee ISO/TC 43, *Acoustics*, Subcommittee SC 2, *Building acoustics*.

Annexes A, B and C of this International Standard are for information only.

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Acoustics — Sound absorbers for use in buildings — Rating of sound absorption

1 Scope

1.1 This International Standard specifies a method by which the frequency-dependent values of the sound absorption coefficient can be converted into a single number. Before this is done, the one-third-octave band values of the sound absorption coefficient measured in accordance with ISO 354 are converted into octave bands.

In annex B a classification method, based on these single numbers, is given for information.

1.2 The single-number rating specified in this International Standard can be used to formulate requirements and to describe acoustical properties of sound-absorbing products to be used for routine applications in normal offices, corridors, class rooms, hospitals, etc. The rating is not appropriate when the products are to be used in qualified environments requiring careful acoustical design by expertise. In such cases, only complete sound absorption data as a function of frequency are satisfactory.

This International Standard is not applicable unless the applications cover the whole frequency range of the reference curve. If only a part of this range is of interest, it may be more appropriate to look for products with a good sound absorption within this range only. The shape indicators described in this International Standard give some guidance in identifying such products which may have a relatively low single number but a much higher potential if a more restricted frequency range is considered. Such products should be judged from the complete sound absorption curve.

As the rating curve in this International Standard has as a lower limit the 250 Hz octave band, the rating is not appropriate below this frequency. If such low frequencies are of interest, reference must be made to the complete sound absorption curve.

This International Standard is, in principle, applicable to all building products for which the sound absorption coefficient has been determined in accordance with ISO 354. It is, however, often not suitable for application to single items, such as chairs, baffles, etc., nor is it applicable to road barriers and road surfaces.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 354:1985, *Acoustics — Measurement of sound absorption in a reverberation room*.

ISO 354:1985/Amd. 1:—1), *Annex D: Test specimen mountings for sound absorption tests*.

1) To be published.