



# SLOVENSKI STANDARD SIST EN ISO 717-1:1997/A1:2006

01-december-2006

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Acoustics - Rating of sound insulation in buildings and of building elements - Part 1:  
Airborne sound insulation - Amendment 1: Rounding rules related to single number  
ratings and single number quantities (ISO 717-1:1996/AM 1:2006)

**iTeh STANDARD PREVIEW**

Akustik - Bewertung der Schalldämmung in Gebäuden und von Bauteilen - Teil 1:  
Luftschalldämmung - Änderung 1: Rundungsregeln für Einzahlbewertungen und  
Einzahlangaben (ISO 717-1:1996/AM 1:2006)

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Acoustique - Évaluation de l'isolement acoustique des immeubles et des éléments de  
construction - Partie 1: Isolement aux bruits aériens - Amendement 1: Regles  
d'arrondissement associées aux évaluations de numéro simple et aux quantités de  
numéro simple (ISO 717-1:1996/AM 1:2006)

**Ta slovenski standard je istoveten z: EN ISO 717-1:1996/A1:2006**

**ICS:**

91.120.20 Acoustics in building. Sound insulation

**SIST EN ISO 717-1:1997/A1:2006 en**

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ICS 91.120.20

English Version

Acoustics - Rating of sound insulation in buildings and of  
building elements - Part 1: Airborne sound insulation -  
Amendment 1: Rounding rules related to single number ratings  
and single number quantities (ISO 717-1:1996/AM 1:2006)

Acoustique - Évaluation de l'isolement acoustique des  
immeubles et des éléments de construction - Partie 1:  
Isolement aux bruits aériens - Amendement 1: Règles  
d'arrondissement associées aux évaluations de numéro  
simple et aux quantités de numéro simple (ISO 717-  
1:1996/AM 1:2006)

Akustik - Bewertung der Schalldämmung in Gebäuden und  
von Bauteilen - Teil 1: Luftschalldämmung - Änderung 1:  
Rundungsregeln für Einzahlbewertungen und  
Einzahlangaben (ISO 717-1:1996/AM 1:2006)

This amendment A1 modifies the European Standard EN ISO 717-1:1996; it was approved by CEN on 14 August 2006.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for inclusion of this amendment into the relevant national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

This amendment exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.



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COMITÉ EUROPÉEN DE NORMALISATION  
EUROPÄISCHES KOMITEE FÜR NORMUNG

Management Centre: rue de Stassart, 36 B-1050 Brussels

## **Foreword**

This document (EN ISO 717-1:1996/A1:2006) has been prepared by Technical Committee CEN/TC 126 "Acoustic properties of building elements and of buildings", the secretariat of which is held by AFNOR, in collaboration with Technical Committee ISO/TC 43 "Acoustics".

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 February 2007, and conflicting national standards shall be withdrawn at the latest by February 2007.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

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**Acoustics — Rating of sound insulation  
in buildings and of building elements —**

Part 1:

**Airborne sound insulation**

AMENDMENT 1: Rounding rules related  
to single number ratings and single number  
quantities

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SIST EN ISO 717-1:1997/A1:2006  
*Acoustique — Évaluation de l'isolement acoustique des immeubles et  
des éléments de construction —  
Partie 1: Isolement aux bruits aériens*

*AMENDEMENT 1: Règles d'arrondissement associées aux évaluations  
de numéro simple et aux quantités de numéro simple*



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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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. 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.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

Amendment 1 to ISO 717-1:1996 was prepared by the European Committee for Standardization (CEN) Technical Committee CEN/TC 126, *Acoustic properties of building products and of buildings* in collaboration with ISO Technical Committee ISO/TC 43, *Acoustics*, Subcommittee SC 2, *Building acoustics*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

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## Introduction

The existing texts on rounding of data in ISO 717-1 and ISO 717-2 are not very precise and lead to different interpretations, especially when implemented numerically in computer software.

This amendment to ISO 717-1:1996 gives more precise instructions through the following:

- modification of the first paragraph of 4.4, Method of comparison, and the addition of footnote 3;
- modification of both paragraphs of 4.5, Calculation of spectrum adaptation terms, and the renumbering of existing footnotes;
- modification of Tables C.1 and C.2.
- addition of a Bibliography.

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# Acoustics — Rating of sound insulation in buildings and of building elements —

## Part 1: Airborne sound insulation

### AMENDMENT 1: Rounding rules related to single number ratings and single number quantities

Page 1, Clause 2:

Replace “ISO 140-4:—<sup>1</sup>” with “ISO 140-4:1998”. Delete footnote 1.

Replace “ISO 140-5:—<sup>2</sup>” with “ISO 140-5:1998”. Delete footnote 2.

Page 7, 4.4, first sentence:

Replace the first sentence with the following:

To evaluate the results of a measurement made in accordance with ISO 140-3, ISO 140-4, ISO 140-5, ISO 140-9 and ISO 140-10 in one-third-octave bands (or octave bands), the measurement data shall be given to one decimal place<sup>1</sup>). Shift the relevant reference curve in increments of 1 dB towards the measured curve until the sum of unfavourable deviations is as large as possible but not more than 32,0 dB (measurement in 16 one-third-octave bands) or 10,0 dB (measurement in 5 octave bands).

Insert new footnote 1 as follows:

1) The different parts of ISO 140 state that the results shall be reported “to one decimal place”. However, if the octave or one-third-octave values have been reported with more than one decimal digit, the values shall be reduced to one decimal place before use in the calculation of the single number rating. This is done by taking the value in tenths of dB closest to the reported values:  $XX.XYZZZ\dots$  is rounded to  $XX.X$  if  $Y$  is less than 5 and to  $XX.X + 0,1$  if  $Y$  is equal to or greater than 5. Software developers should ensure that this reduction applies to the true input values and not only to the displayed precision (as shown on the screen or printed on paper). Generally this can be implemented by the following sequence of instructions: multiply the (positive) number  $XX.XYZZZ\dots$  by 10 and add 0,5, take the integer part and then divide the result by 10. For further details see ISO 31-0.

Page 7, 4.5, following the equation:

Replace the definition of  $X_i$  with the following:

$X_i$  the sound reduction index,  $R_i$ , or apparent sound reduction index,  $R'_i$ , or normalized sound level difference,  $D_{n,i}$ , or standardized sound level difference,  $D_{nT,i}$ , at the measuring frequency,  $i$ , given to one decimal place.

Page 8, 4.5, second paragraph:

Replace first sentence and the first part of the second sentence of the second paragraph with the following:

Calculate the quantity,  $X_{A,i}$ , with sufficient accuracy and round the result to an integer<sup>2</sup>). The resulting spectrum adaptation term is an integer by definition and shall be identified in accordance with the spectrum used, as follows:

In the first sentence of the second paragraph, renumber footnote 3) as footnote 2) and replace the text of the original footnote 3 with the following: