



NSAI
Standards

Irish Standard
I.S. EN 16205:2020

Laboratory measurement of walking noise on floors

I.S. EN 16205:2020

Incorporating amendments/corrigenda/National Annexes issued since publication:

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National Foreword

I.S. EN 16205:2020 is the adopted Irish version of the European Document EN 16205:2020, Laboratory measurement of walking noise on floors

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EUROPEAN STANDARD

EN 16205

NORME EUROPÉENNE

EUROPÄISCHE NORM

November 2020

ICS 91.120.20

Supersedes EN 16205:2013+A1:2018

English Version

Laboratory measurement of walking noise on floors

Mesurage en laboratoire du bruit des pas sur les
planchers

Messung von Gehschall auf Fußböden im Prüfstand

This European Standard was approved by CEN on 21 September 2020.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

This European Standard 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 CEN-CENELEC Management Centre has the same status as the official versions.

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EN 16205:2020 (E)

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European foreword

This document (EN 16205:2020) 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.

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of an identical text or by endorsement, at the latest by May 2021, and conflicting national standards shall be withdrawn at the latest by May 2021.

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

This document supersedes EN 16205:2013+A1:2018.

In comparison with the previous edition, the following technical modifications have been made:

- amendment of the Annex E to include the room correction.

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

EN 16205:2020 (E)**Introduction**

This document sets up a laboratory measurement method to determine noise radiated from a floor covering on a standard concrete floor when excited by a standard tapping machine. The noise is measured in the room where the floor covering and the excitation are located. There is no restriction concerning the type of floor covering unless the required small pads of the flooring could not be assembled. Using the standard tapping machine according to EN ISO 10140 (all parts) means that a more general excitation compared to walking alone is regarded – in the same way as it is accepted for impact sound improvement measurements of floor coverings. The results are expressed in terms of the normalized A-weighted average sound pressure level in the walking room. The results provide information about the noise radiated. A more sophisticated psychoacoustic evaluation did not seem to be appropriate in view of the fact that this measurement stands for a large range of sources with different acoustical behaviour (even if only different types of walking were regarded). A subjective classification of the quality of the floor coverings is not intended.

1 Scope

This document specifies a laboratory measurement method to determine noise radiated from a floor covering on a standard concrete floor when excited by a standard tapping machine.

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.

EN ISO 10140-1, *Acoustics — Laboratory measurement of sound insulation of building elements — Part 1: Application rules for specific products (ISO 10140-1)*

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

EN ISO 10140-3, *Acoustics — Laboratory measurement of sound insulation of building elements — Part 3: Measurement of impact sound insulation (ISO 10140-3)*

EN ISO 10140-4:2010, *Acoustics — Laboratory measurement of sound insulation of building elements — Part 4: Measurement procedures and requirements (ISO 10140-4:2010)*

EN ISO 10140-5, *Acoustics — Laboratory measurement of sound insulation of building elements — Part 5: Requirements for test facilities and equipment (ISO 10140-5)*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN ISO 10140 (all parts) and the following 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

sufficiently large specimen

specimen whose radiated sound power does not increase any longer with size, or which covers the total area of the floor

Note 1 to entry: In case of uncertainty, the testing laboratory will decide which size is sufficient.

3.2

pads

pieces of the flooring under test, which are as large as the hitting areas of the tapping machine hammers

Note 1 to entry: Quadratic pads should be the smallest possible including the whole hitting area.

3.3

walking sound pressure level (in third-octave band f)

$L_{n,walk,i}$

normalized impact sound pressure level in the upper (walking) room with a standardized contribution of the concrete bare floor underneath the floor covering under test

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