



**NSAI**  
Standards

Irish Standard  
I.S. EN 16205:2013+A1:2018

# Laboratory measurement of walking noise on floors

**I.S. EN 16205:2013+A1:2018**

*Incorporating amendments/corrigenda/National Annexes issued since publication:*

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## National Foreword

I.S. EN 16205:2013+A1:2018 is the adopted Irish version of the European Document EN 16205:2013+A1:2018, Laboratory measurement of walking noise on floors

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EUROPEAN STANDARD

**EN 16205:2013+A1**

NORME EUROPÉENNE

EUROPÄISCHE NORM

March 2018

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ICS 91.120.20

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 1 May 2013 and includes Amendment 1 approved by CEN on 12 February 2018.

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<b>Contents</b>	<b>Page</b>
<b>European foreword</b> .....	<b>3</b>
<b>Introduction</b> .....	<b>4</b>
<b>1 Scope</b> .....	<b>5</b>
<b>2 Normative references</b> .....	<b>5</b>
<b>3 Terms and definitions</b> .....	<b>5</b>
<b>4 Principle</b> .....	<b>7</b>
<b>5 Test arrangement</b> .....	<b>8</b>
<b>5.1 Test facilities</b> .....	<b>8</b>
<b>5.2 Equipment</b> .....	<b>8</b>
<b>5.3 Mounting of the specimens</b> .....	<b>8</b>
<b>6 Test procedure</b> .....	<b>8</b>
<b>7 Evaluation of results</b> .....	<b>9</b>
<b>8 Precision</b> .....	<b>9</b>
<b>9 Expression of results</b> .....	<b>9</b>
<b>10 Test report</b> .....	<b>10</b>
<b>Annex A (informative) Presentation of the walking noise spectrum with uncertainty bars (example)</b> .....	<b>11</b>
<b>Annex B (normative) Reference spectrum for laboratory bare floors</b> .....	<b>12</b>
<b>Annex C (informative) Fixing the pads below the tapping machine</b> .....	<b>13</b>
<b>Annex D (informative) Background of the measuring method</b> .....	<b>14</b>
<b>Annex E (informative) Calculation of perceived walking loudness on floor coverings installed floating</b> .....	<b>16</b>
<b>E.1 General</b> .....	<b>16</b>
<b>E.2 Data measured</b> .....	<b>16</b>
<b>E.3 Calculations</b> .....	<b>16</b>
<b>E.3.1 Sound spectrum <math>L_{i,loud}</math></b> .....	<b>16</b>
<b>E.3.2 Loudness RWS</b> .....	<b>16</b>
<b>E.4 Test report</b> .....	<b>17</b>
<b>Bibliography</b> .....	<b>18</b>

## **European foreword**

This document (EN 16205:2013+A1:2018) 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 September 2018, and conflicting national standards shall be withdrawn at the latest by September 2018.

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 includes Amendment 1 approved by CEN on 2018-02-12.

This document supersedes EN 16205:2013.

The start and finish of text introduced or altered by amendment is indicated in the text by tags **A1** **A1**.

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## **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 that the required small pads of the flooring could not be assembled. Using the standard tapping machine according to EN ISO 10140 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 normalised 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 European Standard 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, in whole or in part, are normatively referenced in this document and are indispensable for its application. 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 and the following apply.

### 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 $i$ )**

$L_{n,walk,i}$

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

Note 1 to entry: It is calculated according to Formula (1):

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