

# ACOUSTICS

“Acoustics includes all aspects of generation, propagation, transmission, reproduction, reception, measurement and the effects of sound, and noise affects virtually every aspect of human endeavor.”

(Source: ISO - Strategic Business Plan  
- ISO/TC 43 - October 2021)



## MAIN TECHNICAL COMMITTEES ON ACOUSTICS STANDARDIZATION

### - International level -

#### ➤ ISO/TC 43/SC 2 – Building acoustics

Standards

52

Projects

4

National delegates

1

#### 8 Working Groups

WG 18	Measurement of sound insulation in buildings and of building elements	WG 27	Indoor acoustic environment
WG 29	Acoustic classification scheme for buildings	WG 32	Determination of acoustical parameters of materials
WG 33	Acoustic quality criteria for music rehearsal rooms and spaces	WG 34	Revision of ISO 3382-3
WG 35	Sound absorption	WG 36	Room Acoustics

### - European level -

#### ➤ CEN/TC 126 – Acoustic properties of building elements and of buildings

Standards

54

Projects

3

National delegates

2

#### Scope

Standardization in the field of acoustic properties of building elements and of buildings, including: laboratory methods, expression of results and accuracy; rating of acoustic properties of elements; field measurement methods, expression of results and accuracy; rating of acoustic properties of buildings; methods for determining the acoustic of buildings from the performance of its elements.

#### 5 Working Groups

WG 1	Methods for measuring the sound insulation of building elements and the acoustic performances of buildings	WG 2	Prediction of the acoustic performance of buildings from the performance of elements
WG 5	Coordination working group	WG 7	Laboratory measurement of airborne and structure borne sound from building equipment
WG 12	BIM Acoustics		

### - National level -

#### ➤ ILNAS/TC 103 – Acoustics

Standards

1

Projects

0

National delegates

15

#### Scope

Standardization in the field of building acoustics.

## MAIN STANDARDS ON ACOUSTICS

Determination and application of measurement uncertainties in building acoustics	
EN ISO 12999-1:2020	Part 1: Sound insulation
EN ISO 12999-2:2020	Part 2: Sound absorption
Determination of airflow resistance	
EN ISO 9053-1:2018	Part 1: Static airflow method
EN ISO 9053-2:2020	Part 2: Alternating airflow method
Determination of dynamic stiffness	
EN 29052-1:1992	Part 1: Materials used under floating floors in dwellings
ISO 9052-1:1989	Part 1: Materials used under floating floors in dwellings
Determination of sound absorption coefficient and impedance in impedances tubes	
EN ISO 10534-1:2001	Part 1: Method using standing wave ratio
EN ISO 10534-2:2001	Part 2: Transfer-function method
EN ISO 10534-2:2023	Part 2: Two-microphone technique for normal sound absorption coefficient and normal surface impedance
Field measurement of sound insulation in buildings and of building elements	
EN ISO 16283-1:2014	Part 1: Airborne sound insulation - <i>Amended in 2017</i>
EN ISO 16283-2:2020	Part 2: Impact sound insulation
EN ISO 16283-3:2016	Part 3: Façade sound insulation
Laboratory and field measurement of flanking transmission for airborne, impact and building service equipment sound between adjoining rooms	
EN ISO 10848-1:2017	Part 1: Frame document
EN ISO 10848-2:2017	Part 2: Application to Type B elements when the junction has a small influence
EN ISO 10848-3:2017	Part 3: Application to Type B elements when the junction has a substantial influence
EN ISO 10848-4:2017	Part 4: Application to junctions with at least one Type A element
EN ISO 10848-5:2020	Part 5: Radiation efficiencies of building elements
Laboratory measurement of sound insulation of building elements	
EN ISO 10140-1:2021	Part 1: Application rules for specific products
EN ISO 10140-2:2021	Part 2: Measurement of airborne sound insulation
EN ISO 10140-3:2021	Part 3: Measurement of impact sound insulation
EN ISO 10140-4:2021	Part 4: Measurement procedures and requirements
EN ISO 10140-5:2021	Part 5: Requirements for test facilities and equipment
Laboratory tests on noise emission from appliances and equipment used in water supply installations	
EN ISO 3822-1:1999	Part 1: Method of measurement - <i>Amended in 2008</i>
EN ISO 3822-2:1995	Part 2: Mounting and operating conditions for draw-off taps and mixing valves
EN ISO 3822-3:2018	Part 3: Mounting and operating conditions for in-line valves and appliances
EN ISO 3822-4:1997	Part 4: Mounting and operating conditions for special appliances
Other laboratory measurement	
EN ISO 16251-1:2014	Laboratory measurement of the reduction of transmitted impact noise by floor coverings on a small floor mock-up - Part 1: Heavyweight compact floor
EN 14366-1:2023	Laboratory measurement of airborne and structure-borne sound from service equipment - Part 1: Application rules for waste water installations
EN 16205:2020	Laboratory measurement of walking noise on floors
EN 15657:2017	Laboratory measurement of structure-borne sound from building service equipment for all installation conditions
Measurement of room acoustic parameters	
EN ISO 3382-1:2009	Part 1: Performance spaces
EN ISO 3382-2:2008	Part 2: Reverberation time in ordinary rooms <i>Technical Corrigendum in 2009</i>
EN ISO 3382-3:2022	Part 3: Open plan offices

Measurement of sound insulation in buildings and of building elements using sound intensity	
EN ISO 15186-1:2003	Part 1: Laboratory measurements
EN ISO 15186-2:2010	Part 2: Field measurements
EN ISO 15186-3:2010	Part 3: Laboratory measurements at low frequencies
Other Measurements	
EN ISO 354:2003	Measurement of sound absorption in a reverberation room
ISO 23351-1:2020	Measurement of speech level reduction of furniture ensembles and enclosures - Part 1: Laboratory method
EN ISO 16032:2004	Measurement of sound pressure level from service equipment in buildings - Engineering method
EN ISO 10052:2021	Field measurements of airborne and impact sound insulation and of service equipment sound - Survey method
Rating of sound insulation in buildings and of building elements	
EN ISO 717-1:2020	Part 1: Airborne sound insulation
EN ISO 717-2:2020	Part 2: Impact sound insulation
Test code	
EN 16703:2015	Test code for drywall systems of plasterboard with steel studs - Airborne sound insulation
EN 16487:2014	Test code for suspended ceilings - Sound absorption
Estimation of acoustic performance of building from the performance of elements	
EN ISO 12354-1:2017	Part 1: Airborne sound insulation between rooms
EN ISO 12354-2:2017	Part 2: Impact sound insulation between rooms
EN ISO 12354-3:2017	Part 3: Airborne sound insulation against outdoor sound
EN ISO 12354-4:2017	Part 4: Transmission of indoor sound to the outside
EN 12354-5:2023	Part 5: Sounds levels due to the service equipment
EN 12354-6:2003	Part 6: Sound absorption in enclosed spaces
Sound-scattering properties of surfaces	
ISO 17497-1:2004	Part 1: Measurement of the random-incidence scattering coefficient in a reverberation room (2014: <i>amended</i> )
ISO 17497-2:2012	Part 2: Measurement of the directional diffusion coefficient in a free field
Various acoustics	
EN ISO 11654:1997	Sound absorbers for use in buildings - Rating of sound absorption
EN ISO 18233:2006	Application of new measurement methods in building and room acoustics
ISO 20189:2018	Screens, furniture and single objects intended for interior use - Rating of sound absorption and sound reduction of elements based on laboratory measurements
ISO 23591:2021	Acoustic quality criteria for music rehearsal rooms and spaces
ISO/TS 19488:2021	Acoustic classification of dwellings
Technical reports	
CEN/TR 15226:2006	Building products - Treatment of acoustics in product technical specifications
CEN/TR 16961:2018	Declaration of uncertainties in test reports
Performance criteria for residential buildings	
ILNAS 103-1:2022	<i>Critères de performance pour les bâtiments d'habitation</i>

