

Accreditation



The Deutsche Akkreditierungsstelle attests with this **Accreditation Certificate** that the testing laboratory

TFI Aachen GmbH
Charlottenburger Allee 41, 52068 Aachen

meets the requirements according to DIN EN ISO/IEC 17025:2018 for the conformity assessment activities listed in the annex to this certificate. This includes additional existing legal and normative requirements for the testing laboratory, including those in relevant sectoral schemes, provided they are explicitly confirmed in the annex to this certificate.

The management system requirements of DIN EN ISO/IEC 17025 are written in the language relevant to the operations of testing laboratories and they conform to the principles of DIN EN ISO 9001.

This accreditation was issued in accordance with Art. 5 Para. 1 Sentence 2 of Regulation (EC) 765/2008, after an accreditation procedure was carried out in compliance with the minimum requirements of DIN EN ISO/IEC 17011 and on the basis of a review and decision of the appointed accreditation committees.

This accreditation certificate only applies in connection with the notices of 18.12.2024 with accreditation number D-PL-17152-01.

It consists of this cover sheet, the reverse side of the cover sheet and the following annex with a total of 13 pages.

Registration number of the accreditation certificate: **D-PL-17152-01-00**

Berlin, 18.12.2024

Dipl.-Ing. Evelyn Körner
Head of Technical Unit

Translation issued:
18.12.2024



Dipl.-Ing. Evelyn Körner
Head of Technical Unit

The certificate together with the annex reflects the status as indicated by the date of issue. The current status of any given scope of accreditation can be found in the directory of accredited bodies maintained by Deutsche Akkreditierungsstelle GmbH (www.dakks.de).

This document is a translation. The definitive version is the original German accreditation certificate.

See notes overleaf

Deutsche Akkreditierungsstelle GmbH

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The Deutsche Akkreditierungsstelle GmbH (DAkKS) is the entrusted national accreditation body of the Federal Republic of Germany according to § 8 section 1 AkkStelleG in conjunction with § 1 section 1 AkkStelleGBV. DAkKS is designated as the national accreditation authority by Germany according to Art. 4 Para. 4 of Regulation (EC) 765/2008 and clause 4.7 of DIN EN ISO/IEC 17000.

Pursuant to Art. 11 section 2 of Regulation (EC) 765/2008, the accreditation certificate shall be recognised as equivalent by the national authorities within the scope of this Regulation as well as by the WTO member states that have committed themselves in bilateral or multilateral mutual agreements to recognise the certificates of accreditation bodies that are members of ILAC or IAF as equivalent.

DAkKS is a signatory to the multilateral agreements for mutual recognition of the European co-operation for Accreditation (EA), International Accreditation Forum (IAF) and International Laboratory Accreditation Co-operation (ILAC).

The up-to-date state of membership can be retrieved from the following websites:

EA: www.european-accreditation.org

ILAC: www.ilac.org

IAF: www.iaf.nu

Deutsche Akkreditierungsstelle

Annex to the Accreditation Certificate D-PL-17152-01-00 according to DIN EN ISO/IEC 17025:2018

Valid from: 18.12.2024

Date of issue: 18.12.2024

Holder of accreditation certificate:

TFI Aachen GmbH
Charlottenburger Allee 41, 52068 Aachen

with the location

TFI Aachen GmbH
Charlottenburger Allee 41, 52068 Aachen

The testing laboratory meets the requirements of DIN EN ISO/IEC 17025:2018 to carry out the conformity assessment activities listed in this annex. The testing laboratory meets additional legal and normative requirements, if applicable, including those in relevant sectoral schemes, provided that these are explicitly confirmed below.

The management system requirements of DIN EN ISO/IEC 17025 are written in the language relevant to the operations of testing laboratories and they conform to the principles of DIN EN ISO 9001.

Physical-technological tests on floor coverings and floor systems, installation materials, textiles, foams and latices; determination (sampling and analysis) of organic air constituents in indoor measurements and test chamber tests; acoustic and thermal tests on building products, building components and products of interior decoration;

Testing of construction products (system 3 of assessment and verification of constancy of performance) within the scope of the Regulation (EU) No 305/2011 laying down harmonised conditions for the marketing of construction products (Construction Products Regulation)

This certificate annex is only valid together with the written accreditation certificate and reflects the status as indicated by the date of issue. The current status of any given scope of accreditation can be found in the directory of accredited bodies maintained by Deutsche Akkreditierungsstelle GmbH at <https://www.dakks.de>.

Abbreviations used: see last page

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Tests of reaction to fire, of acoustic performance and of emissions of dangerous substances, for which the reference to a relevant harmonised technical specification is not required (point 3. Annex V, (EU) No 305/2011)

The testing laboratory is permitted, without being required to inform and obtain prior approval from DAkkS, to use standards or equivalent testing methods (without internal test procedures) listed here with different issue dates.

Within the given testing field marked with *, the testing laboratory is permitted, without being required to inform and obtain prior approval from DAkkS, the free choice of standard or equivalent testing methods.

The testing laboratory maintains a current list of all testing methods within the flexible scope of accreditation.

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1 Physical-technological tests of floor coverings and floor systems, flooring products, textiles, foams and latices

1.1 Primary fire properties

1.1.1 Flammability

ISO 7176-16 2012	Wheelchairs Part 16: Resistance to ignition of postural support devices (<i>withdrawn standard</i>)
ISO 8191-1 1987	Furniture; Assessment of the ignitability of upholstered furniture; Part 1: Ignition source: smouldering cigarette
ISO 8191-2 1988	Furniture; assessment of ignitability of upholstered furniture; Part 2: Ignition source: match-flame equivalent
DIN EN ISO 11925-2 2020-07	Reaction to fire tests - Ignitability of products subjected to direct impingement of flame - Part 2: Single-flame source test
DIN EN 1021-1 2014-10	Furniture - Assessment of the ignitability of upholstered furniture - Part 1: Ignition source smouldering cigarette
DIN EN 1021-2 2014-10	Furniture - Assessment of the ignitability of upholstered furniture - Part 2: Ignition source match flame equivalent

1.1.2 Combustibility

DIN EN ISO 9239-1 2010-11	Reaction to fire tests for floorings - Part 1: Determination of the burning behaviour using a radiant heat source
DIN 4102-1 1998-05	Fire behaviour of building materials and building components – Part 1: Building materials; concepts, requirements and tests (<i>here only: Chapter 6.2, Building material class B2, page 10 ff. of standard</i>)
ASTM E648 2019 ae1	Standard Test Method for Critical Radiant Flux of Floor-Covering Systems Using a Radiant Heat Energy Source

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1.2 Flooring tests *

Type of test	Parameter	Measuring range	Testing methods (characteristic)
Determination of the number	Number per unit length	0 – 100 nubs / 10 cm	ISO 1763:2020
Length measurement	Thickness	0 – 1 µm	DIN EN ISO 24340:2012-04
		0 – 250 mm	ISO 1765:1986 ISO 1766:1999 ISO 3415:1986 ISO 24343-1:2007 DIN EN ISO 24346:2012-04
	Length change after thermal stress	0 – 500 mm	ISO 2551:2020 DIN EN ISO 23999:2022-02 DIN EN 986:2006-03 DIN EN 994:2012-03
	Length, width, straightness, perpendicularity	0 – 5000 mm	DIN EN ISO 24343-1:2012-04 DIN EN ISO 24342:2019-03
Mass determination	Mass	0 – 5000 g	ISO 8543:2020 DIN EN ISO 23997:2012-04 DIN EN 984:2002-04
Wear behaviour	Mass loss	0 – 1000 g	DIN EN ISO 12951:2020-10
	Change of appearance	Grade 1-5	
	Damage	Suitability passed / failed	
Subjective-visual assessment	Change in appearance Change in colour Damage	Grade 1-5	DIN EN 425:2002-08 DIN EN 985:2001-12 DIN EN 1269:2020-01 EN 1471:1996-12 + Amendment 1:2003-06 DIN EN 1814:2005-11 DIN EN ISO 4918:2021-06 DIN EN ISO 9405:2017-09 ISO 10361:2015 DIN EN ISO 10833:2019-09
Sliding behaviour	Coefficient of sliding friction μ	0,01 – 1,0	DIN EN 13893:2003-02

ISO 1763
2020 Carpets; Determination of number of tufts and/or loops per unit length and per unit area

ISO 1765
1986 Machine-made textile floor coverings; Determination of thickness

ISO 1766
1999 Textile floor coverings - Determination of thickness of pile above the substrate

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ISO 2551 2020	Textile floor coverings and textile floor coverings in tile form - Determination of dimensional changes due to the effects of varied water and heat conditions and distortion out of plane
ISO 3415 1986	Textile floor coverings - Determination of thickness loss after brief, moderate static loading
ISO 8543 2020	Textile floor coverings - Methods for determination of mass <i>(withdrawn standard)</i>
ISO 10361 2015	Textile floor coverings - Production of changes in appearance by means of Vettermann drum and hexapod tumbler tester
ISO 24343-1 2007	Resilient and laminate floor coverings - Determination of indentation and residual indentation - Part 1: Residual indentation
DIN EN ISO 4918 2021-06	Resilient, textile and laminate floor coverings - Castor chair test (ISO 4918:2016, including Amd 1:20)
DIN EN ISO 9405 2017-09	Textile floor coverings - Assessment of changes in appearance
DIN EN ISO 10833 2019-09	Resilient and textile floor-coverings - Determination of side length, edge straightness and squareness of tiles
DIN EN ISO 12951 2020-10	Textile floor coverings - Determination of mass loss, fibre bind and stair nosing appearance change using the Lisson Tretrad machine
DIN EN ISO 23997 2012-04	Resilient floor coverings - Determination of dimensional stability and curling after exposure to heat
DIN EN ISO 23999 2022-02	Resilient floor coverings - Determination of thickness of layers
DIN EN ISO 24340 2012-04	Resilient and textile floor coverings - Determination of length, width and straightness of sheet
DIN EN ISO 24341 2012-04	Resilient and laminate floor coverings - Determination of indentation and residual indentation - Part 1: Residual indentation
DIN EN ISO 24342 2019-03	Resilient floor coverings - Determination of dimensional stability and curling after exposure to heat
DIN EN ISO 24343-1 2012-04	Resilient floor coverings - Determination of overall thickness

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DIN EN ISO 24346 2012-04	Textile floor coverings - Determination of resistance to damage at cut edges using the modified Vettermann drum test
DIN EN 425 2002-08	Resilient and laminate floor coverings - Castor chair test (withdrawn standard)
DIN EN 984 2002-04	Textile floor coverings - Determination of the mass per unit area of the use surface of needled floor coverings
DIN EN 985 2001-12	Textile floor coverings - Castor chair test (Tests A-C)
DIN EN 986 2006-03	Textile floor coverings - Tiles - Determination of dimensional changes due to the effects of varied water and heat conditions and distortion out of plane
DIN EN 994 2012-03	Textile floor coverings - Determination of the side length, squareness and straightness of tiles (<i>withdrawn standard</i>)
DIN EN 1269 2020-01	Textile floor coverings - Assessment of impregnations in needled floor coverings by means of a soiling test
DIN EN 1471 1996-12 + Amendment 1 2003-06	Textile floor coverings - Assessment of changes in appearance (<i>withdrawn standard</i>)
DIN EN 1814 2005-11	Textile floor coverings - Determination of resistance to damage at cut edges using the modified Vettermann drum test (<i>withdrawn standard</i>)
DIN EN 13893 2003-02	Resilient, laminate and textile floor coverings - Measurement of dynamic coefficient of friction on dry floor surfaces

1.3 Electrostatic tests *

Type of test	Parameter	Measuring range	Testing methods (<i>characteristic</i>)
Resistances	Electrical resistance	$10^3 - 10^{13} \Omega$	DIN EN 1081:2021-01 ISO 10965:2011
Electrostatic charge	Voltage	-5 kV bis +5 kV	DIN EN 1815:2016-12 ISO 6356:2012

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ISO 6356 2012	Textile and laminate floor coverings - Assessment of static electrical propensity - Walking test
ISO 10965 2011	Textile floor coverings - Determination of electrical resistance
DIN EN 1081 2021-01	Resilient, laminate and modular multilayer floor coverings - Determination of the electrical resistance
DIN EN 1815 2016-12	Resilient and laminate floor coverings - Assessment of static electrical propensity

1.4 Colour fastness tests *

Type of test	Parameter	Measuring range	Testing methods (characteristic)
Colour fastness due to light	Colour change	Blue scale 1-8	DIN EN ISO 105-B02:2014-11
Colour fastness due to bleeding	Bleeding	Grey scale 1-5	DIN EN ISO 105-E01:2013-06 DIN EN ISO 105-X12:2016-11

DIN EN ISO 105-B02 2014-11	Textiles - Tests for colour fastness - Part B02: Colour fastness to artificial light: Xenon arc fading lamp test (<u>here only</u> : Method 1 - 3)
DIN EN ISO 105-E01 2013-06	Textiles - Tests for colour fastness - Part E01: Colour fastness to water
DIN EN ISO 105-X12 2016-11	Textiles - Tests for colour fastness - Part X12: Colour fastness to rubbing

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2 Determination (sampling and analysis) of organic air constituents in indoor measurements and test chamber tests *

Type of test	Parameter	Measuring range	Testing methods (characteristic)
Emissions VOC by means of GC-MS and HPLC-system	Toluene equivalent concentration	Substance specific and toluene equivalent 1 µg/m³ to 100 g/m³	DIN ISO 16000-3:2013-01 DIN ISO 16000-6:2012-11 DIN EN ISO 16000-9:2008-04 DIN EN ISO 16017-1:2001-10 DIN EN 16516:2020-10
	Substance-specific concentration		
	TVOC		
	Total SVOC		
	R-value		
	Total VOC without NIK value		
	Total carcinogens, Formaldehyde		
	Total VVOC		

DIN ISO 16000-3
2013-01

Indoor air - Part 3: Determination of formaldehyde and other carbonyl compounds in indoor air and test chamber air - Active sampling method
(*withdrawn standard*)

DIN ISO 16000-6
2022-03

Indoor air - Part 6: Determination of organic compounds (VVOC, VOC, SVOC) in indoor and test chamber air by active sampling on sorbent tubes, thermal desorption and gas chromatography using MS or MS FID

DIN EN ISO 16000-9
2008-04

Indoor air - Part 9: Determination of the emission of volatile organic compounds from building products and furnishing - Emission test chamber method
(*withdrawn standard*)

DIN EN ISO 16000-11
2006-06

Indoor air - Part 11: Determination of the emission of volatile organic compounds from building products and furnishing - Sampling, storage of samples and preparation of test specimens
(*withdrawn standard*)

DIN ISO 16000-28
2020-11

Indoor air - Part 28: Determination of odour emissions from building products using test chambers

DIN EN ISO 16017-1
2001-10

Indoor, ambient and workplace air - Sampling and analysis of volatile organic compounds by sorbent tube/thermal desorption/capillary gas chromatography - Part 1: Pumped sampling

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DIN EN 16516 2020-10	Construction products: Assessment of release of dangerous substances - Determination of emissions into indoor air
ISO 7150-1 1984-06	Water quality; Determination of ammonium; Part 1 : Manual spectrometric method <i>here: Application for the determination of ammonium nitrogen on sample solutions according to DIN EN 16516:2020-10 taken from the test chambers air.</i>

3 Acoustic investigations on building products and components (building acoustics) *

Type of test	Parameter	Measuring range	Testing methods (characteristic)
Acoustical absorption	Sound pressure level over time	10 dB – 137 dB (50 Hz – 5000 Hz)	DIN EN ISO 354: 2003-12 ASTM C 423:2022 DIN EN ISO 11654:1997-07
Impact sound insulation		10 dB – 137 dB (50 Hz – 5000 Hz)	DIN EN ISO 10140-3:2021-09 DIN EN ISO 717-2:2021-05
Airborne sound insulation		10 dB – 137 dB (50 Hz – 5000 Hz)	DIN EN ISO 10140-2 :2021-09 DIN EN ISO 717-1:2021-05
Walking sound		10 dB – 137 dB (50 Hz – 5000 Hz)	DIN EN 16205:2021-02

DIN EN ISO 354
2003-12 Acoustics - Measurement of sound absorption in a reverberation room

DIN EN ISO 717-1
2021-05 Acoustics - Rating of sound insulation in buildings and of building elements - Part 1: Airborne sound insulation

DIN EN ISO 717-2
2021-05 Acoustics - Rating of sound insulation in buildings and of building elements - Part 2: Impact sound insulation

DIN EN ISO 10140-2
2021-09 Acoustics - Laboratory measurement of sound insulation of building elements - Part 2: Measurement of airborne sound insulation

DIN EN ISO 10140-3
2021-09 Acoustics - Laboratory measurement of sound insulation of building elements - Part 3: Measurement of impact sound insulation

DIN EN ISO 11654
1997-07 Acoustics - Sound absorbers for use in buildings - Rating of sound absorption

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DIN EN 16205 Laboratory measurement of walking noise on floors
2021-02

ASTM C 423 Standard Test Method for Sound Absorption and Sound Absorption
2022 Coefficients by the Reverberation Room Method

4 Thermal investigations on construction products and components *

Type of test	Parameter	Measuring range	Testing methods (characteristic)
Thermal resistance	Heat output	0,1 m ² K/W (0,02 m ² K/W) - 0,5 m ² K/W	DIN EN ISO 12664:2021-05
		0,5 m ² K/W – 7,5 m ² K/W	DIN EN ISO 12667:2021-05

DIN EN 12664 Thermal performance of building materials and products -
2001-05 Determination of thermal resistance by means of guarded hot plate
and heat flow meter methods - Dry and moist products with medium
and low thermal resistance

DIN EN 12667 Thermal performance of building materials and products -
2001-05 Determination of thermal resistance by means of guarded hot plate
and heat flow meter methods - Products of high and medium
thermal resistance

5 Testing of construction products (system 3 of assessment and verification of constancy of performance) within the scope of the Regulation (EU) No 305/2011 laying down harmonised conditions for the marketing of construction products (Construction Products Regulation)

Decision / resolution of the Commission	System ¹⁾	Technical specification
1997/808/EC Floorings	3	EN 13813:2002 Screed material and floor screeds - Screed materials - Properties and requirements
		EN 14041:2004+AC:2006 Resilient, textile and laminate floor coverings - Essential characteristics
		EN 14904:2006 Surfaces for sports areas - Indoor surfaces for multi-sports use - Specification
		EN 14342:2013 Wood flooring and parquet — Characteristics, evaluation of conformity and marking
1998/437/EC Internal and external wall and ceiling finishes	3	EN 15102:2007+A1:2011 Decorative wallcoverings - Roll and panel form

¹⁾ System of assessment and verification of consistency of performance

The requirements for a testing laboratory are fulfilled according to article 43 of the Construction Products Regulation. Testing methods, which are necessary for determining the product type and cannot be executed by the holder of the certificate, are described in the list of subcontractors.

Without prior approval by the Deutsche Akkreditierungsstelle GmbH (German Accreditation Body), the testing laboratory body is permitted to use new revisions of the harmonised technical specifications.

Annex to the Accreditation Certificate D-PL-17152-01-00

6 Tests of reaction to fire, of acoustic performance and of emissions of dangerous substances, for which the reference to a relevant harmonised technical specification is not required (point 3. Annex V, (EU) No 305/2011)

6.1 Reaction to fire

EN ISO 9239-1 2010	Reaction to fire tests for floorings - Part 1: Determination of the burning behaviour using a radiant heat source
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EN ISO 11925-2 2010	Reaction to fire tests - Ignitability of products subjected to direct impingement of flame - Part 2: Single-flame source test
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in conjunction with:

*EN 13501-1
2019*

Fire classification of construction products and building elements - Part 1: Classification using data from reaction to fire tests

6.2 Acoustic performance

EN ISO 10140-1 2021	Acoustics - Laboratory measurement of sound insulation of building elements - Part 1: Application rules for specific products
EN ISO 10140-3 2021	Acoustics - Laboratory measurement of sound insulation of building elements - Part 3: Measurement of impact sound insulation
EN ISO 354 2003	Acoustics - Measurement of sound absorption in a reverberation room

6.3 Emission of dangerous substances

EN 16516 2017+A1 2020	Construction products: Assessment of release of dangerous substances - Determination of emissions into indoor air
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The requirements for a testing laboratory are fulfilled according to article 43 of the Construction Products Regulation.

Abbreviation used:

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Annex to the Accreditation Certificate D-PL-17152-01-00

ASTM	American Society for Testing and Materials
CEN	European Committee for Standardization
DIN	German Institute for Standardisation
EC	European Commission
EN	European Standard
ISO	International Organization for Standardisation