

Deutsche Akkreditierungsstelle GmbH

Annex to the Accreditation Certificate D-PL-11054-01-00 according to DIN EN ISO/IEC 17025:2018

Valid from: **18.02.2022**

Date of issue: 18.02.2022

Holder of certificate:

Entwicklungs- und Prüflabor Holztechnologie GmbH

at the locations:

**Zellescher Weg 24, 01217 Dresden
Klingenbergstraße 2, 32758 Detmold**

Tests in the fields:

The effectiveness of wood preservatives and other biocides; the durability of wood and wooden materials; the resistance of materials to microorganisms (laboratory tests and field studies including weathering); microbial load of material and air samples; diagnosis of micro-organisms; physical-chemical and chemical testing of wood, wood products, wooden materials, coating materials and adhesives; chemical examinations of wood preservatives; mechanical-physical testing of wood, wood products and wooden materials, furniture and furniture accessories, train and vehicle seating, building elements, selected testing of coating materials, plastics, textiles and laminates; surface testing and environmental simulation for furniture and furniture accessories, building elements, coating materials, plastics, textiles and laminates; testing of the electrostatic properties of floors and components/ assemblies; selected fire testing;

Testing in the field of furniture Section 20 ProdSG [Product Safety Act] (GS mark); testing of wooden materials for the evaluation and review of demands on formaldehyde emissions (DD) in accordance with EPA and CARB regulation

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

*The certificate together with its annex reflects the status at the time of the date of issue. The current status of the scope of accreditation can be found in the database of accredited bodies of Deutsche Akkreditierungsstelle GmbH.
<https://www.dakks.de/en/content/accredited-bodies-dakks>*

Testing of construction products (System 3 for the Evaluation and Review of Constancy of Performance) within the framework of Regulation (EU) No. 305/2011 for laying down harmonised conditions for the marketing of construction products (Construction Products Regulation);

Testing of fire behaviour and the emission of dangerous substances from construction products which does not require a reference to a relevant harmonised technical specification Point 3. Annex V, (EU) No. 305/2011)

The testing laboratory is authorised to apply the standardised testing methods listed here across various norm versions without the need to inform the DAkkS in advance and receive their approval.

The testing laboratory is authorised to freely select standardised testing methods, or testing methods which are on the same level, within those ranges of testing marked with a * without the need to inform the DAkkS in advance and receive their approval. The testing methods listed serve as an example.

The testing laboratory has a current list of all testing methods which are within the flexible scope of accreditation.

The testing methods which are carried out in the Dresden location and the Detmold location are marked with "DD" and "DT".

1 Biological Testing * (DD)

Testing in the areas of effectiveness of wood preservatives against wood-destroying and wood-discolouring fungi; the effectiveness of biocides (including in-can preservers and film protection) against microorganisms; the resistance of materials to colonisation and attack from microorganisms; laboratory tests and field studies including weathering via outdoor exposure, evaporation or leaching; microbial load of material and air samples; qualitative and quantitative evidence of microorganisms

Type of Testing	Matrix	Parameters	Characteristic Testing Methods
Testing with microorganisms (wood-destroying and wood-discolouring fungi, moulds, bacteria and algae) on materials with and without biocidal protection and/or treatment.	Wood (also modified or otherwise compensated) Wooden materials such as WPC, NFC, BPC Insulation materials Sealants and insulators Mineral and organic construction materials Floor coverings Coatings Paper and cardboard Textiles and leather Plastics Electronic components	Loss of mass Visual evaluation Loss of strength Cell count	DIN EN 73 DIN EN 84 DIN EN 113 DIN EN 152 DIN EN 350 DIN V ENV 807 DIN EN 839 DIN EN 846 DIN EN 1104 ASTM D3273 ÖNORM B 6010 DIN V ENV 12038 DIN CEN/TS 15083 DIN EN 15101-1 DIN CEN/TS 15397 DIN EN 15458 ISO 16869 ISO 22196 DIN EN 60068-2-10
Qualitative and quantitative identification of microorganisms which are destructive to materials or hazardous to health (e.g. wood-destroying fungi, moulds, bacteria, algae) in the environment with microbiological methods	Wood, wooden materials such as WPC, NFC, BPC Insulation materials Sealants and insulators Mineral and organic construction materials Floor coverings Coatings Paper and cardboard Textiles and leather Plastics Electronic components	Mycelial growth Formation of spores Biomass Visual evaluation Cell count	DIN ISO 16000 Parts 17-21

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DIN EN 73 2014-12	Wood preservatives; Accelerated ageing of treated wood prior to biological testing; Evaporative ageing procedure
DIN EN 84 1997-05	Wood preservatives; Accelerated ageing of treated wood prior to biological testing - Leaching procedure
DIN EN 113 Amendment 1 2004-01	Wood preservatives; Test method for determining the protective effectiveness against wood destroying basidiomycetes - Determination of the toxic values
DIN EN 152 2012-02	Wood preservatives - Determination of the protective effectiveness of a preservative treatment against blue stain in wood in service - Laboratory method
DIN EN 252 2015-01	Wood preservatives; Field test method for determining the relative protective effectiveness of a wood preservative in ground contact
DIN EN 350 2016-12	Durability of wood and wood-based products - Testing and classification of the durability to biological agents of wood and wood-based materials
DIN V ENV 807 2001-12	Wood preservatives; Determination of the effectiveness against soft rotting micro-fungi and other soil inhabiting micro-organisms
DIN EN 839 2015-01	Wood preservatives – Determination of the protective effectiveness against wood destroying basidiomycetes – Application by surface treatment
DIN EN ISO 846 1997-10	Plastics - Evaluation of the action of micro-organisms
DIN EN 1104 2005-11	Paper and board intended to come into contact with foodstuff - Determination of the transfer of antimicrobial constituents
ASTM D3273 2016	Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber
ÖNORM B 6010 1999-01	Materials for thermal and/or acoustic insulation in building construction - Test methods
DIN V ENV 12038 2002-07	Durability of wood and wood-based products; Wood-based panels - Method of test for determining the resistance against wood-destroying basidiomycetes

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DIN CEN/TS 15083-1 2005-10	Durability of wood and wood-based products – Determination of the natural durability of solid wood against wood-destroying fungi, Test method – Part 1: Basidiomycetes
DIN CEN/TS 15083-2 2005-10	Durability of wood and wood-based products – Determination of the natural durability of solid wood against wood-destroying fungi, Test method Part 2: Soft rot fungi
DIN EN 15101-1 2013-12 Annex F	Thermal insulation products for buildings - In-situ formed loose fill cellulose (LFCI) products - Part 1: Specification for the products before installation; Annex F: Method for the determination of resistance towards mould infestation
DIN CEN/TS 15397 2006-08	Wood preservatives - Method for natural preconditioning out of ground contact of treated wood specimens prior to biological laboratory test
DIN EN 15457 2014-11	Paints and varnishes - Laboratory method for testing the efficacy of film preservatives in a coating against fungi
DIN EN 15458 2014-11	Paints and varnishes - Laboratory method for testing the efficacy of film preservatives in a coating against algae
DIN ISO 16000-17 2010-06	Indoor air - Part 17: Detection and enumeration of moulds - Culture-based method (ISO 16000-17:2008)
DIN ISO 16000-18 2012-01	Indoor air - Part 18: Detection and enumeration of moulds - Sampling by impaction (ISO 16000-18:2011)
DIN ISO 16000-19 2014-12	Indoor air - Part 19: Sampling strategy for moulds (ISO 16000-19:2012)
DIN ISO 16000-20 2015-11	Indoor air - Part 20: Detection and enumeration of moulds - Determination of total spore count (ISO 16000-20:2014)
DIN ISO 16000-21 2014-05	Indoor air - Part 21: Detection and enumeration of moulds - Sampling from materials (ISO 16000-21:2013)
ISO 16869 2008-06	Plastics - Assessment of the effectiveness of fungistatic compounds in plastics formulations
ISO 22196 2011-08	Plastics - Measurement of antibacterial activity on plastics and other non-porous surfaces

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DIN EN 60068-2-10 2006-03	Environmental testing - Part 2 - 10: Tests - Test J and guidance: Mould growth (IEC 60068-2-10:2005)
DIBt Testing Guidelines Section 5.3 1982-10	Bestimmung der Wirkungstiefe von Holzschutzmitteln gegenüber holzerstörenden Basidiomyceten [Determination of the depth of impact of wood preservatives against wood-destroying basidiomycetes (planning attempt)]
IHD Testing Method AA-20-21 2012-02	Screeningverfahren zur Bestimmung der fungiziden Wirksamkeit von Testsubstanzen im Agaruntermischverfahren [Screening procedure for the determination of the fungicidal effectiveness of test substances in the agar mixing process]
IHD Testing Method AA-20-26 2018-03	Mikrobiologische Untersuchungen von Material- und Luftproben [Microbiological testing of material and air samples]

2 Chemical Testing (DD)

Testing in the areas of harmful emissions from products and materials incl. olfactory inspections, determination of organic substances, heavy metal content and migration, formaldehyde content, wood preservatives content

2.1 Sampling and analytics of harmful emissions and olfactory tests

The following were employed as testing methods: test chamber method, desiccator method, flask method, gas analysis method and similar methods.

The analytics takes place via gas chromatography, HPLC, photometry, sensory analysis *

Type of Testing	Matrix	Parameters	Characteristic Testing Methods
Emissions from materials: test chamber method, desiccator testing, gas analysis method (formaldehyde), flask method (formaldehyde) sampling and determination in each case	Construction materials, construction products, furniture, furniture elements, wood, wooden materials, furniture components, products for indoor use	VVOC, formaldehyde, VOC, SVOC, odour	DIN EN 717-1 ASTM D6007-14 ASTM E1333-14 VDA 276-2 DIN ISO 16000-3 DIN ISO 16000-6 DIN EN ISO 16000-9 to - 11 DIN ISO 16000-28 DIN CEN/TS 16516 DIN EN ISO 10580 ASTM D5582 – 14 JIS A 1460 DIN EN 717-3 DIN EN ISO 12460-3 DIN EN 12149-C
Sampling and determination of indoor air pollutions	Indoor air	VVOC, formaldehyde, VOC, SVOC, odour	DIN EN ISO 16000-3 DIN EN ISO 16000-6 DIN ISO 16000-28 VDI 3484-1 VDI 3484-2

ASTM D 6007 - 02 Standard Test Method for Determining Formaldehyde Concentrations in Air from Wood Products Using a Small Scale Chamber

ASTM D 6007 - 14 Standard Test Method for Determining Formaldehyde Concentrations in Air from Wood Products using a Small Scale Chamber

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ASTM D 5582 - 00	Standard Test Method for Determining Formaldehyde Levels from Wood Products Using a Desiccator
ASTM D 5582 - 14	Standard Test Method for Determining Formaldehyde Levels from Wood Products Using a Desiccator
ASTM E 1333 - 10	Standard Test Method for Determining Formaldehyde Concentrations in Air and Emission Rates from Wood Products Using a Large Chamber
ASTM E 1333 - 14	Standard Test Method for Determining Formaldehyde Concentrations in Air and Emission Rates from Wood Products Using a Large Chamber
GP Dynamic MicroChamber	The GP Dynamic Microchamber Computer-integrated formaldehyde test system, User Manual, copyright 2012 (DMC 2012 GP User's Manual)
Emission testing method of California Specification 0135 2010-02	Standard method for the testing and evaluation of volatile organic chemical emissions from indoor sources using environmental chambers. Version 1.1
DIN EN 120 1992-08	Wood-based panels - Determination of formaldehyde release - Extraction method (called perforator method)
DIN EN 717-1 2005-01	Wood-based panels - Determination of formaldehyde release - Part 1: Formaldehyde emission by the chamber method
DIN EN 717-2 1995-01	Wood-based panels - Determination of formaldehyde release - Part 2: Formaldehyde release by the gas analysis method
DIN EN 717-3 1996-05	Wood-based panels - Determination of formaldehyde release - Part 3: Formaldehyde release by the flask method
DIN EN ISO 10580 2012-04	Resilient, textile and laminate floor coverings - Test method for volatile organic compound (VOC) emissions
DIN EN 12149 1998-01	Wallcoverings in roll form - Determination of volatile formaldehyde with the modified WKI method, Test C
DIN EN ISO 12460-3 2016-05	Wood-based panels - Determination of formaldehyde release - Part 3: Gas analysis method

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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
DIN ISO 16000-6 2012-11	Indoor air - Part 6: Determination of volatile organic compounds in indoor and test chamber air by active sampling on Tenax TA [®] sorbent, thermal desorption and gas chromatography using MS or 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
DIN EN ISO 16000-10 2006-06	Indoor air - Part 10: Determination of the emission of volatile organic compounds from building products and furnishing - Emission test cell method
DIN ISO 16000-28 2012-12	Indoor air - Part 28: Determination of odour emissions from building products using test chambers
JIS A 1460: 2001	Building boards Determination of formaldehyde emission - Desiccator method
JIS A 1460: 2015	Building boards Determination of formaldehyde emission – Desiccator method
VDA 276-2	Bestimmung organischer Emissionen aus Bauteilen für den Kfz-Innenraum mit einer 1 m ³ - Prüfkammer Teil 2: Bestimmung der Abgabe von Formaldehyd, Ammoniak und Phenolen nach der Methode der Ausgleichskonzentration [Determination of organic emissions from components for a car interior of 1 m ³ - Testing chamber part 2: Determination of formaldehyde, ammonia and phenol emissions according to the equalisation concentration method]
VDI 3484 Sheet 2 2001-11	Gaseous ambient air measurements - Indoor-air pollution measurements - Measurement of the formaldehyde concentration with the acetylacetone method
VDI 3485 Sheet 1 1988-12	Ambient air measurement; measurement of gaseous phenolic compounds; p-nitroaniline method

2.2 Determination of substances in materials by means of extraction and instrumental analysis, such as gas chromatography, photometry, coulometric Karl Fischer titration*

Type of Testing	Matrix	Parameters	Characteristic Testing Methods
Determination of substances by means of extraction and instrumental analysis (Gas chromatography, photometry, Karl Fischer titration)	Coatings, paints, dispersions, adhesives, wood, wooden materials, plastics, textiles	VOC, SVOC, PAH, active ingredients in wood preservatives, phthalates, formaldehyde	DIN EN ISO 17895 ISO 11890-2 IHD-W-407 IHD-W-409 IHD-W-410 AfPS-GS-2014-01-PAK CPSC-CH-C1001-09.3 DIN EN ISO 12460-5 E DIN EN 14041 DIN EN 12149 VdL-RL 03 [German Paint and Printing Industry Guideline]

AfPS-GS-2014-01-PAK 2014-01	Prüfung und Bewertung von Polyzyklischen Aromatischen Kohlenwasserstoffen (PAK) bei der Zuerkennung des GS-Zeichens [Testing and evaluation of polycyclic aromatic hydrocarbons (PAHs) in the course of GS mark certification]
CPSC-CH-C1001-09.3 2010-04	Standard Operating Procedure for Determination of Phthalates
DIN EN 12149: 1998 Test B	Wallcoverings in roll form - Determination of vinyl chloride monomer
DIN EN ISO 12460-5 2015	Wood-based panels - Determination of formaldehyde release - Part 5: Extraction method (called the perforator method)
DIN EN ISO 17895 2005-06	Paints and varnishes; Determination of the volatile organic compound content of low-VOC emulsion paints (in-can VOC)
DIN EN ISO 17895 Amendment 1 2007-11	Paints and varnishes; Determination of the volatile organic compound content of low-VOC emulsion paints (in-can VOC)

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ISO 11890-2 2013-07	Paints and varnishes - Determination of volatile organic compound (VOC) content - Part 2: Gas-chromatographic method
DIN EN 14041 2016-07 draft	Resilient, textile and laminate floor coverings - Essential characteristics Annex B: Determination of pentachlorophenol (PCP) content in elastic and textile floor coverings Annex E: Determination of polycyclic aromatic hydrocarbon (PAH) content Annex F: Determination of phthalate content
IHD-W 407 2017_V3_0	Bestimmung von chlorierten Phenolen in Holz und anderen Materialien – Methanolextraktion [The determination of chlorinated phenols in wood and other materials – Methanol extraction]
IHD-W 409 2017_V2_0	Bestimmung von chlorierten Phenolen in Holz und anderen Materialien - Toluol extraktion [The determination of chlorinated phenols in wood and other materials – Toluene extraction]
IHD-W 410 2017_V2_0	Bestimmung von Lindan, 2,4- und 4,4-DDT in Holz und anderen Materialien nach Toluol extraktion [The determination of lindane, 2.4 and 4.4 DDT in wood and other materials after toluene extraction]
VdL-RL 03: 1997	Guideline for the determination of the concentration of formaldehyde in water-dilutable emulsion paints and related products [Richtlinie zur Bestimmung der Formaldehydkonzentration in wasserverdünnbaren Dispersionsfarben und verwandten Produkten]

2.3 Determination of heavy metals and other elements in materials (migration, content) by means of ICP-OES *

Type of Testing	Matrix	Parameters	Characteristic Testing Methods
Determination of heavy metals and other elements by means of ICP-OES	Coatings, paints, surface coatings, wood, wooden products, plastics	Heavy metals, elements	DIN EN 71-3 CPSC-CH-E1002-08 ASTM E1613-04 CPSC-CH-E1003-09.1 ASTM E1645 IHD-W 448 DIN EN ISO 11885 DIN EN 12149

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ASTM E 1613-04 2004-08	Standard test Method for Determination of Lead by Inductively Coupled Plasma Atomic Emission Spectrometry (ICP-AES), Flame Atomic Absorption Spectrometry (FAAS), or Graphite Furnace Atomic Absorption Spectrometry (GFAAS) Techniques
ASTM E1645 2007-08	Standard Practice for Preparation of Dried Paint Samples by Hotplate or Microwave Digestion for Subsequent Lead Analysis
CPSC-CH-E1002-08 2009-02	Standard Operating Procedure for Determining Total Lead (Pb) in Non-Metal Children's Products
CPSC-CH-E1003-09.1 2011-02	Standard Operating Procedure for Determining Lead (Pb) in Paint and Other Similar Surface Coatings
DIN EN 71-3 2017-10	Safety of toys - Part 3: Migration of certain elements
DIN EN ISO 11885 2009-09	Water quality - Determination of selected elements through inductively coupled plasma optical emission spectrometry (ICP-OES) (ISO 11885:2007)
DIN EN 12149 1998-01 Test A	Wallcoverings in roll form - Determination of migration of heavy metals and certain other elements (antimony, arsenic, barium, cadmium, chromium, mercury, lead and selenium)
IHD-W 448 2017-11	Bestimmung von Schwermetallen und anderen Elementen mittels Atomemissionsspektrometrie (ICP-OES) [Determination of heavy metals and other elements by means of atomic emission spectrometry (ICP-OES)]

2.4 Testing Methods for Wooden Materials and Coatings

DIN EN 322 1993-08	Wood-based panels; Determination of moisture content
DIN EN ISO 3251 2008-08	Paints, varnishes and plastics - Determination of non-volatile-matter content
DIN EN 52161-1 2006-06	Testing of wood preservatives; Detection of wood preservatives in wood; Sampling from structural timber in service

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ISO 11890-1 2007-07	Paints and varnishes - Determination of volatile organic compound (VOC) content - Part 1: Difference method
ISO 16979 2003-05	Wood-based panels; Determination of moisture content
ISO 16999 2003-07	Wood-based panels - Sampling and specimen cutting

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3 Material and Product Tests

3.1 General Physical-Mechanical Material Tests (DD)

3.1.1 Wood, wooden materials, plastics, insulation materials *

Test type	Measured variable / Test parameters	Measuring and testing range	Characteristic processes
Bending	Force	0 - 160 KN	DIN EN 789 DIN EN 310 DIN EN 408 ISO 178 DIN EN 52186
Traction	Force	0 - 250 KN	DIN EN 300, DIN EN 314 DIN EN 319 DIN EN 320 DIN EN 622-5,789, DIN EN 1087-1, ISO 527-2, ISO 527-3
Pressure	Force	0 - 250 KN	DIN EN 789, DIN EN 14080, DIN EN 13354
Deformation	Travel	0 - 500 mm	DIN EN 789 DIN EN 408 DIN EN 1156 DIN EN 52186
Length, width, thickness	Travel	0 - 500 mm	DIN EN 310, DIN EN 317 DIN EN 318 DIN EN 323 DIN EN 324-1 DIN EN 789 DIN EN 1602, DIN 52184 ISO 24336 DIN EN ISO 24343-1
Mass	Mass	0 – 150 kg	DIN EN 318 DIN EN 322 DIN EN 323 DIN EN 789 DIN EN 13183-1

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DIN EN ISO 178 2013-09	Plastic composites - Determination of flexural properties
DIN EN ISO 179-1 2010-11	Plastics - Determination of Charpy impact properties - Part 1: Non-instrumented impact test
DIN EN 310 1993-08	Wood-based panels - Determination of modulus of elasticity in bending and of bending strength
DIN EN 311 2002-08	Wood-based panels - Surface soundness - Test method
DIN EN 314-1 2005-03	Plywood - Bonding quality - Part 1: Test methods
DIN EN 314-2 1993-08	Plywood - Bonding quality - Part 2: Requirements
DIN EN 317 1993-08	Particleboards and fibreboards - Determination of swelling in thickness after immersion in water
DIN EN 318 2002-06	Wood-based panels - Determination of dimensional changes associated with changes in relative humidity
DIN EN 319 1993-08	Particleboards and fibreboards - Determination of tensile strength perpendicular to the plane of the board
DIN EN 320 2011-07	Fibreboards - Determination of resistance to axial withdrawal of screws
DIN EN 321 2002-03	Wood-based panels - Determination of moisture resistance under cyclic test conditions
DIN EN 322 1993-08	Wood-based panels - Determination of moisture content
DIN EN 323 1993-08	Wood-based panels - Determination of density
DIN EN 324-1 1993-08	Wood-based panels - Determination of dimensions of boards - Part 1: Determination of thickness, width and length
DIN EN 324-2 1993-08	Wood-based panels; Determination of dimensions of boards; Part 2: Determination of squareness and edge straightness

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DIN EN 325 2012-06	Wood-based panels - Determination of dimensions of test pieces
DIN EN 326-1 1994-08	Wood-based panels - Sampling, cutting and inspection - Part 1: Sampling and cutting of test pieces and expression of test results
DIN EN 326-2 2014-10	Wood-based panels - Sampling, cutting and inspection - Part 2: Quality control in the factory
DIN EN 326-3 2004-02	Wood-based panels - Sampling, cutting and inspection - Part 3: Inspection of an isolated lot of panels
DIN EN 336 2013-12	Structural timber - Sizes, permitted deviations
DIN EN 384 2016-12	Structural timber - Determination of characteristic values of mechanical properties and density
DIN EN 408 2012-10	Timber structures - Structural timber and glued laminated timber - Determination of some physical and mechanical properties
DIN EN 438-2 2016-06	High-pressure decorative laminates (HPL) - Sheets based on thermosetting resins (usually called laminates) - Part 2: Determination of properties
DIN EN 438-7 2005-04	High-pressure decorative laminates (HPL) - Sheets based on thermosetting resins (usually called laminates) - Part 7: Compact laminate and HPL composite panels for internal and external wall and ceiling finishes
DIN EN ISO 527-1 2012-06	Plastics - Determination of tensile properties - Part 1: General principles
DIN EN ISO 527-2 2012-06	Plastics - Determination of tensile properties - Part 2: Test conditions for moulding and extrusion plastics
DIN EN ISO 527-3 2003-07	Plastics - Determination of tensile properties - Part 3: Test conditions for films and sheets
DIN EN ISO 604 2003-12	Plastics - Determination of compressive properties
DIN EN 635-1 1995-01	Plywood - Classification by surface appearance - Part 1: General

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DIN EN 635-2 1995-08	Plywood - Classification by surface appearance - Part 2: Hardwood
DIN EN 635- 3 1995-08	Plywood - Classification by surface appearance - Part 3: Softwood
DIN EN 789 2005-01	Timber structures - Test methods - Determination of mechanical properties of wood based panels
DIN EN 822 2013-05	Thermal insulating products for building applications - Determination of length and width
DIN EN 823 2013-05	Thermal insulating products for building applications - Determination of thickness
DIN EN 824 2013-05	Thermal insulating products for building applications - Determination of squareness
DIN EN 825 2013-05	Thermal insulating products for building applications - Determination of flatness
DIN EN 826 2013-05	Thermal insulating products for building applications - Determination of compression behaviour
DIN EN 1087-1 1995-04	Particleboards - Determination of moisture resistance - Part 1: Boil test
DIN EN 1128 1995-11	Cement-bounded particleboards - Determination of hard body impact resistance
DIN EN 1156 2013-10	Wood-based panels - Determination of duration of load and creep factors
DIN EN 1195 1998-06	Timber structures - Test methods - Performance of structural floor decking
DIN EN 1309-1 1997-08	Round and sawn timber - Method of measurement of dimensions - Part 1: Sawn timber
DIN EN 1328 1996-09	Cement bonded particleboards - Determination of frost resistance
DIN EN 1382 2000-03	Timber structures - Test methods - Withdrawal capacity of timber fasteners

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DIN EN 1383 2016-07	Timber structures - Test methods - Pull through resistance of timber fasteners
DIN EN 1533 2010-12	Wood flooring - Determination of bending strength under static load - Test methods
DIN EN 1534 2011-01	Wood flooring - Determination of resistance to indentation - Test method
DIN EN 1602 2013-05	Thermal insulating products for building applications - Determination of the apparent density
DIN EN 1603 2013-05	Thermal insulating products for building applications - Determination of dimensional stability under constant normal laboratory conditions (23 °C/ 50 % relative humidity)
DIN EN 1604 2013-05	Thermal insulating products for building applications - Determination of dimensional stability under specified temperature and humidity conditions
DIN EN 1606 2013-05	Thermal insulating products for building applications - Determination of compressive creep
DIN EN 1607 2013-05	Thermal insulating products for building applications - Determination of tensile strength perpendicular to faces
DIN EN 1608 2013-05	Thermal insulating products for building applications - Determination of tensile strength parallel to faces
DIN EN 1609 2013-05	Thermal insulating products for building applications - Determination of short term water absorption by partial immersion
DIN EN ISO 1798 2008-04	Flexible cellular polymeric materials - Determination of tensile strength and elongation at break
DIN EN ISO 1856 2008-01	Flexible cellular polymeric materials - Determination of compression set
DIN EN 1910 2016-08	Wood and parquet flooring and wood panelling and cladding - Determination of dimensional stability
DIN EN ISO 2440 2010-06	Flexible and rigid cellular polymeric materials - Accelerated ageing tests

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DIN 4074-1 2012-06	Strength grading of wood - Part 1: Coniferous sawn timber
DIN 4074-2 1958-12	Building Timber for Wood Building Components - Quality Conditions for Building Logs (Softwood)
DIN 4074-5 2008-12	Strength grading of wood - Part 5: Sawn hard wood
DIN EN ISO 6892-1 2009-12	Metallic materials - Tensile testing - Part 1: Method of test at room temperature
DIN EN 12086 2013-06	Thermal insulating products for building applications - Determination of water vapour transmission properties
DIN EN 12087 2013-06	Thermal insulating products for building applications - Determination of long term water absorption by immersion
DIN EN 12089 2013-06	Thermal insulating products for building applications - Determination of bending behaviour
DIN EN 12090 2013-06	Thermal insulating products for building applications - Determination of shear behaviour
DIN EN 12091 2013-06	Thermal insulating products for building applications - Determination of freeze-thaw resistance
DIN EN 12105 1998-10	Resilient floor coverings - Determination of moisture content of agglomerated composition cork
DIN EN 12430 2013-05	Thermal insulating products for building applications - Determination of behaviour under point load
DIN EN 12431 2013-05	Thermal insulating products for building applications - Determination of thickness for floating floor insulating products
DIN EN 12871 2013-09	Wood-based panels - Performance specifications and requirements for load bearing boards for use in floors, walls and roofs
DIN EN 12939 2001-02	Thermal performance of building materials and products - Determination of thermal resistance by means of guarded hot plate and heat flow meter methods, Products of high and medium thermal resistance

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DIN EN 13183-1 2002-07 + Amendment 1: 2003-12	Moisture content of a piece of sawn timber - Part 1: Determination by oven dry method
DIN EN 13354 2009-02	Solid wood panels - Bonding quality - Test method
ISO 13362 2000-11	Flexible cellular polymeric materials - Determination of compression set in humid conditions
DIN EN 14019 2016-11	Curtain Walling - Impact resistance - Performance requirements
DIN EN 14080 2013-09	Timber structures - Glued laminated timber and glued laminated solid timber - Requirements
DIN EN 14374 2005-02	Timber structures - Structural laminated veneer lumber - Requirements
DIN EN 15534-1 2018-02	Composites made from cellulose-based materials and thermoplastics (usually called wood-polymer composites (WPC) or natural fibre composites (NFC)) - Part 1: Test methods for characterisation of compounds and products
DIN V 18032-2 2001-04	Sport halls - Halls for gymnastics, games and multi-purpose use - Part 2: Floors for sporting activities; Requirements, testing
DIN EN ISO 23996 2012-04	Resilient floor coverings - Determination of density
DIN EN ISO 23997 2012-04	Resilient floor coverings - Determination of mass per unit area
ISO 24334 2014-12	Laminate floor coverings - Determination of locking strength for mechanically assembled panels
ISO 24336 2005-03	Laminate floor coverings - Determination of thickness swelling after partial immersion in water
ISO 24337 2006-08	Laminate floor coverings - Determination of geometrical characteristics
DIN EN ISO 24341 2012-04	Resilient and textile floor coverings - Determination of length, width and straightness of sheet

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DIN EN ISO 24342 2012-04	Resilient and textile floor-coverings - Determination of side length, edge straightness and squareness of tiles
DIN EN ISO 24343-1 2012-04	Resilient and laminate floor coverings - Determination of indentation and residual indentation - Part 1: Residual indentation
DIN EN ISO 24344 2012-04	Resilient floor coverings - Determination of flexibility and deflection
DIN EN ISO 24345 2012-04	Resilient floor coverings - Determination of peel resistance
DIN EN ISO 24346 2012-04	Resilient floor coverings - Determination of overall thickness
DIN 50100 1978-02	Testing of Materials - Continuous Vibration Test, Definitions, Symbols, Procedure, Evaluation
DIN 52180-1 1977-11	Testing of wood - Sampling and cutting, principles
DIN 52182 1976-09	Testing of wood - Determination of density
DIN 52184 1979-05	Testing of wood - Determination of swelling and shrinkage
DIN 52185 1976-09	Testing of wood - Compression test parallel to grain
DIN EN 52186 1978-06	Testing of wood - Bending test
DIN 52187 1979-05	Testing of wood - Determination of ultimate shearing stress parallel to grain
DIN 52188 1979-05	Testing of wood - Determination of ultimate tensile stress parallel to grain
DIN 52189-1 1981-12	Testing of wood - Impact bending test; Determination of impact bending strength
DIN 52192 1979-05	Testing of wood - Compression test perpendicular to grain

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DIN 52367 2017-05	Wood-based panels - Determination of shear strength parallel to the surface
DIN 52376 1978-11	Testing of plywood - Determination of compression strength parallel to the surfaces
DIN 52377 1978-11	Testing of plywood - Determination of modulus of elasticity in tension and of tensile strength
DIN 53255 2017-08	Testing of wood adhesives and glued wood joints - Mechanical delamination tests by grooving and chopping
DIN 53293 1982-02	Testing of sandwiches - Bending test
DIN 53463 1974-04	Testing of Laminates - Splitting Test on Laminated Sheets
DIN 68141 2016-12	Wood adhesives - Determination of the open drying time and evaluation of wetting and brushability
DIN 68365 2008-12	Sawn timber for carpentry - Appearance grading - Softwood
DIN 68705-2 2003-10	Plywood - Part 2: Blockboard and laminboard for general use
DIN 68705-3 1981-12	Plywood; veneered plywood <i>(standard withdrawn)</i>
DIN 68705-4 1981-12	Plywood; core-plywood for buildings purposes <i>(standard withdrawn)</i>
DIN 68705-5 1980-10	Plywood; Veneer plywood of beech for building <i>(standard withdrawn)</i>
DIN 68705-5 Supplement 1 1980-10	Interrelations between the composition of the panel, elastic properties and strengths <i>(standard withdrawn)</i>
ETB fall prevention 1985-06	ETB guideline "Bauteile, die gegen Absturz sichern" ["Components which protect against falling"]

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3.1.2 Bondings, adhesive tests, load-bearing applications

DIN EN 302-1 2013-06	Adhesives for load-bearing timber structures - Test methods - Part 1: Determination of longitudinal tensile shear strength
DIN EN 302-2 2013-06	Adhesives for load-bearing timber structures - Test methods - Part 2: Determination of resistance to delamination
DIN EN 302-3 2013-06	Adhesives for load-bearing timber structures - Test methods - Part 3: Determination of the effect of acid damage to wood fibres by temperature and humidity cycling on the transverse tensile strength
DIN EN 302-4 2013-06	Adhesives for load-bearing timber structures - Test methods - Part 4: Determination of the effects of wood shrinkage on the shear strength
DIN EN 302-5 2013-06	Adhesives for load-bearing structures - Test methods - Part 5: Determination of maximum assembly time under referenced conditions
DIN EN 302-6 2013-06	Adhesives for load-bearing timber structures - Test methods - Part 6: Determination of the minimum pressing time under referenced conditions
DIN EN 302-7 2013-06	Adhesives for load-bearing timber structures - Test methods - Part 7: Determination of the working life under referenced conditions
DIN EN 15416-2 2008-03	Adhesives for load bearing timber structures other than phenolic and aminoplastic - Test methods - Part 2: Static load test of multiple bondline specimens in compression shear

3.1.3 Bondings, bond strength, adhesive tests, non-load-bearing applications

DIN EN 205 2016-12	Adhesives - Wood adhesives for non-structural applications - Determination of tensile shear strength of lap joints
DIN 281 1994-03	Parquet adhesives - Requirements, testing, instructions for processing (standard withdrawn)
DIN EN 14257 2006-09	Adhesives - Wood adhesives - Determination of tensile strength of lap joints at elevated temperature (WATT'91)

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3.1.4 Special physical material properties

DIN EN ISO 354 2003-12	Measurement of sound absorption in a reverberation room
DIN EN ISO 717-1 2013-06	Acoustics - Rating of sound insulation in buildings and of building elements - Part 1: Airborne sound insulation
DIN EN ISO 717-2 2013-06	Acoustics - Rating of sound insulation in buildings and of building elements - Part 2: Impact sound insulation
DIN EN ISO 10140-2 2010-12	Acoustics - Laboratory measurement of sound insulation of building elements - Part 2: Measurement of airborne sound insulation
DIN EN ISO 10140-3 2015-11	Acoustics - Laboratory measurement of sound insulation of building elements - Part 3: Measurement of impact sound insulation
DIN EN ISO 11654 1997-07	Sound absorbers for use in buildings; Rating of sound absorption
DIN EN 16205 2013-09	Laboratory measurement of walking noise on floors
DIN CEN/TS 16354 2014-03	Laminate floor coverings - Underlays - Specification, requirements and test methods
IHD <i>Werknorm</i> [work standard] 431 2003-04	Bestimmung des raumakustischen Verhaltens (Gehschall – Begehung durch einen Probanden) [Determination of the acoustic behaviour of a room (walking noise - inspection through a test subject)]
EPLF Standard 021029-3 2004-10	Determination of the acoustic behaviour of a room (walking noise - stimulus by means of tapping machine)
EPLF Working Draft WD 021029-5 plus 2010-03	Acoustics - Measurement of reflected walking sound using an impulse hammer
ASTM E 90 2009	Laboratory measurement of airborne sound insulation from room dividers
ASTM E 413 2016	Rated values for sound insulation; Classification

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ASTM E492 2009	Laboratory measurement of structure-borne sound transmission through floors and ceilings with tapping machine
ASTM E 989 2006	Rated values for structure-borne sound transmission; Classification
ASTM E 2179 2003	Standard Test Method for Laboratory Measurement of the Effectiveness of Floor Coverings in Reducing Impact Sound Transmission Through Concrete Floors

3.2 General Insulation and Humidity-Related Material Tests (DD)

DIN EN ISO 12572 2017-05	Hygrothermal performance of building materials and products - Determination of water vapour transmission properties
DIN EN 12664 2001-05	Thermal performance of building materials and products - 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 2001-05	Thermal performance of building materials and products - Determination of thermal resistance by means of guarded hot plate and heat flow meter methods - Products of high and medium thermal resistance
DIN EN 12939 2001-02	Thermal performance of building materials and products - Determination of thermal resistance by means of guarded hot plate and heat flow meter methods, Products of high and medium thermal resistance

3.3 Component Testing *

3.3.1 Mechanical-physical and climatic testing; windows, doors, vendor parts (DD)

Test type	Measured variable / Test parameters	Measuring and testing range	Characteristic processes
Usability test rig KS Schulten KS PC 1887 Sizes:	Compressed air (wind)	-3 to - 4000 Pa +3 to + 4000 Pa	DIN EN 1026 DIN EN 1027 DIN EN 12211
	Air flow rate	0.1 m ³ /h - 800 m ³ /h	DIN EN 1026

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Test type	Measured variable / Test parameters	Measuring and testing range	Characteristic processes
W 3400 x H 3500 mm	Water flow rate	1 – 45 l/min	DIN EN 1027 DIN EN 12155
	Length/position sensor	0 – 50 (± 25) mm	DIN EN 12211
Continuous operation test rig (incl. measuring devices for speed, strength, torque and angle of rotation)	Speed	0 – 800 mm/s	DIN EN 1191
	Torque	0 – 100 Nm	
	Angle of rotation	0 – 160°	
Torque measuring device	Torque	0.2 - 12 Nm	DIN EN12046-1 DIN EN12046-2
Force measuring device	Force	0 – 10 kN	DIN EN 179 DIN EN 1125
Position sensor	Length	0 – 100 mm	DIN EN 14609
Impactor/Sandbag	Mass	50 kg / 30 – 50 kg	DIN 18008-4 DIN EN 949 DIN EN 1629 DIN EN 13049
	Drop height	(100) 200 – 950 mm	
Steel ball with downpipe	Mass	1.03 kg	DIN EN 950 DIN 18008-4
	Drop height	300 / 600 / 1000 / 1600 mm 1000 / 2000 mm	
Flatness deformation measurement	Travel	0 – 30 (±15) mm	DIN EN 952
Climate testing	Temperature	-15° C – 70° C	DIN EN 1294
	Humidity	20% – 90 % relative humidity	

DIN 4102-18
1991-03

Fire behaviour of building materials and components - Fire barriers - Verification of automatic closure (continuous performance test)

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DIN 18008-1 2010-12	Glass in Building - Design and construction rules - Part 1: Terms and general bases
DIN 18008-2 2010-12 + Amendment 1 2011-04	Glass in Building - Design and construction rules - Part 2: Linearly supported glazings
DIN 18008-3 2013-07	Glass in Building - Design and construction rules - Part 3: Point fixed glazing
DIN 18008-4 2013-07	Glass in Building - Design and construction rules - Part 4: Additional requirements for barrier glazing
DIN 18095-2 1991-03	Doors - Smoke control doors; type testing for durability and leakage
DIN 18104-1 2013-05	Mechanical security equipment - Part 1: Burglar resistant products for port installation for windows and doors - Requirements and test methods
DIN 18104-2 2013-05	Mechanical security devices - Part 2: Additional burglar resistant products for windows and doors - Requirements and test methods
DIN EN 107 1982-02	Methods of testing windows - Mechanical tests
DIN EN 179 2008-04	Building hardware - Emergency exit devices operated by a lever handle or push pad, for use on escape routes - Requirements and test methods
DIN EN 947 1999-05	Hinged or pivoted doors - Determination of the resistance to vertical load
DIN EN 948 1999-11	Hinged or pivoted doors - Determination of the resistance to static torsion
DIN EN 949 1999-05	Windows and curtain walling, doors, blinds and shutters - Determination of the resistance to soft and heavy body impact for doors
DIN EN 950 1999-11	Door leaves - Determination of the resistance to hard body impact

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DIN EN 951 1999-05	Door leaves - Method for measurement of height, width, thickness and squareness
DIN EN 952 1999-11	Door leaves - General and local flatness - Measurement method
DIN EN 1026 2016-09	Windows and doors - Air permeability - Test method
DIN EN 1027 2016-09	Windows and doors - Water tightness - Test method
DIN EN 1125 2008-04	Building hardware - Panic exit devices operated by a horizontal bar, for use on escape routes - Requirements and test methods
DIN EN 1191 2013-04	Windows and doors - Resistance to repeated opening and closing - Test method
DIN EN 1628 2016-03	Pedestrian doorsets, windows - Curtain walling, grilles and shutters - Burglar resistance - Test method for the determination of resistance under static loading
DIN EN 1629 2016-03	Pedestrian doorsets, windows - Curtain walling, grilles and shutters - Burglar resistance - Test method for the determination of resistance under dynamic loading
DIN EN 1630 2016-03	Pedestrian doorsets, windows - Curtain walling, grilles and shutters - Burglar resistance - Test method for the determination of resistance to manual burglary attempts
DIN EN 1932 2013-09	External blinds and shutters - Resistance to wind loads - Method of testing
DIN EN12046-1 2004-04	Operating forces - Test method - Part 1: Windows
DIN EN 12046-2 2000-12	Operating forces - Test method - Part 2: Doors
DIN EN 12153 2000-09	Curtain walling - Air permeability - Test methods
DIN EN 12155 2000-10	Curtain walling - Watertightness - Laboratory test under static pressure

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DIN EN 12179 2000-09	Curtain walling - Resistance to wind load - Test method
DIN EN 12211 2016-10	Windows and doors - Resistance to wind load - Test method
DIN EN 12600 2003-04	Glass in building - Pendulum tests - Impact test method and classification for flat glass
DIN EN 13049 2003-08	Windows - Soft and heavy body impact - Test method, safety requirements and classification
DIN EN 13115 2001-11	Windows - Classification of mechanical properties - Racking, torsion and operating forces
DIN EN 13330 2013-09	Shutters - Hard body impact - Test method
DIN EN 13527 2001-01	Shutters and blinds - Measurement of operating force
EN 13637 2015-12	Building hardware - Electrically controlled exit systems for use on escape routes - Requirements and test methods
DIN EN 14608 2004-09	Windows - Determination of the resistance to racking
DIN EN 14609 2004-09	Windows - Determination of the resistance to static torsion

3.3.2 Climatic component testing (DD)

Testing- and measuring devices / processes	Measurement parameters	Measurement range	Characteristic processes
Climatic test chambers	Length	0 – 25 mm	DIN EN 1121 DIN EN 13420

DIN EN 1121 2000-09	Doors; Behaviour between two different climates; Test method
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DIN EN 1294 2000-07 Door leaves - Determination of the behaviour under humidity variations in successive uniform climates

DIN EN 13420 2011-07 Windows - Behaviour between different climates - Test method

3.3.3 Thermal component testing (DD)

Testing- and measuring devices / processes	Measurement parameters	Measurement range	Characteristic processes
Hot box	Heat transition coefficient (U-value)	0.1 – 10 W / m ² K	DIN EN 12567-1 DIN EN 12412-2 DIN EN 8990
Calculation software FEM (Finite- Element-Method) additional calculation programs	Heat transition coefficient (U-value)	0.1 – 10 W / m ² K	DIN EN ISO 10077-1 DIN EN ISO 10077-2 DIN EN 673
	Heat transfer resistance (R-value)	5 – 0.01 m ² K/W	DIN EN ISO 6946
	linear thermal bridge (ψ -value)	0 – 1 W / m ² K	DIN EN ISO 10211
	Surface temperature	-50 – +100 °C	DIN EN ISO 10211
	Temperature factors / Isothermal circulation	0 – 1	DIN 4108-2

DIN EN 673 2011-04 Glass in building - Determination of thermal transmittance (U value) - Calculation method

DIN EN 12412-2 2003-11 Thermal performance of windows, doors and shutters - Determination of thermal transmittance by hot box method - Part 2: Frames

DIN EN ISO 6946 2018-03 Building components and building elements - Thermal resistance and thermal transmittance - Calculation methods

DIN EN ISO 8990 1996-09 Thermal insulation - Determination of steady-state thermal transmission properties - Calibrated and guarded hot box

DIN EN ISO 10077-1 2018-01 Thermal performance of windows, doors and shutters - Calculation of thermal transmittance - Part 1: General

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DIN EN ISO 10077-2 2018-01	Thermal performance of windows, doors and shutters - Calculation of thermal transmittance - Part 2: Numerical method for frames
DIN EN ISO 10211 2018-03	Thermal bridges in building construction - Heat flows and surface temperatures - Detailed calculations
DIN EN ISO 12567-1 2010-12	Thermal performance of windows and doors - Determination of thermal transmittance by the hot-box method - Part 1: Complete windows and doors
DIN EN ISO 12567-2 2006-03	Thermal performance of windows and doors - Determination of thermal transmittance by hot box method - Part 2: Roof windows and other projecting windows
DIN EN ISO 12631 2013-01	Thermal performance of curtain walling - Calculation of thermal transmittance
DIN 4108-2 2013-02	Thermal protection and energy economy in buildings - Part 2: Minimum requirements to thermal insulation
DIN 52619-3 1985-02	Testing of thermal insulation - Determination of the thermal resistance and the thermal transmission coefficient of windows - Determination on frames
ISO 15099 2003-11	Thermal performance of windows, doors and shading devices - Detailed calculations

3.4 Testing of Furniture, Furniture Components and Fittings (includes testing for the GS mark)

IHD-W 441 2005-09	Prüfmethoden zur Bestimmung der elastomechanischen Eigenschaften von Sitz-Polstermöbeln [Test methods for determining the elastomechanical qualities of upholstered furniture]	DD
IHD-W 442 2005-01	Prüfmethoden zur Bestimmung der mikroklimatischen Eigenschaften von Sitz-Polstermöbeln [Test methods for determining the microclimatic qualities of upholstered furniture]	DD
IHD-W 443 2005-01	Prüfmethoden zur Bestimmung der Stützfunktion von Sitz-Polstermöbeln [Test methods for determining the support function of upholstered furniture]	DD

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IHD-W 444 2005-01	Anforderungskatalog zur ganzheitlichen Komfortbewertung von Sitz-Polstermöbeln [Catalogue of requirements for the holistic assessment of the comfort of upholstered furniture]	DD
DIN EN 527-1 2011-08	Office furniture - Work tables and desks - Part 1: Dimensions	DD/ DT
DIN EN 527-2 2017-03	Office furniture - Work tables and desks - Part 2: Mechanical safety requirements	DD/ DT
DIN EN 581-2 2017-01	Outdoor furniture - Seating and tables for camping, domestic and contract use - Part 2: Mechanical safety requirements and test methods for seating	DD/ DT
DIN EN 581-3 2017-04	Outdoor furniture - Seating and tables for camping, domestic and contract use - Part 3: Mechanical safety requirements for tables	DD/ DT
DIN EN 716-2 2017-08	Furniture - Children's cots and folding cots for domestic use; Part 2: Test methods	DD/ DT
DIN EN ISO 845 2009-10	Cellular plastics and rubbers - Determination of apparent density	DD
DIN EN 1022 2005-09	Domestic furniture - Seating - Determination of stability	DD/ DT
DIN EN 1022 2017-06 draft	Furniture - Seating - Determination of stability	DD/ DT
DIN EN 1023-1 1996-05	Office furniture - Screens - Part 1: Dimensions	DD
DIN EN 1023-3 2001-01	Office furniture - Screens - Part 3: Test methods	DD
DIN EN 1129-2 1995-04	Furniture - Foldaway beds - Safety requirements and testing - Part 2: Test methods	DD/ DT
DIN EN 1130-2 1996-07	Furniture - Cribs and cradles for domestic use - Part 2: Test methods	DD/ DT

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DIN EN 12520 2016-03	Furniture - Strength, durability and safety - Requirements for domestic seating	DD/ DT
DIN EN 12521 2016-03	Furniture - Strength, durability and safety - Requirements for domestic tables	DD/ DT
DIN EN 1272 2017-08	Child care articles - Table mounted chairs - Safety requirements and test methods	DD/ DT
DIN EN 1273 2005-08	Child care articles - Baby walking frames - Safety requirements and test methods	DD
DIN EN 1334 1996-07	Domestic furniture - Beds and mattresses - Methods of measurement and recommended tolerances	DD
DIN EN 1335-1 2002-08	Office furniture - Office work chair - Part 1: Dimensions - Determination of dimensions	DD
DIN EN 1335-3 2009-08	Office furniture - Office work chair - Part 3: Safety test methods	DD
DIN EN 15372 2017-02	Furniture - Strength, durability and safety - Requirements for non-domestic tables	DD/ DT
DIN EN 1725 1998-02	Domestic furniture - Beds and mattresses - Safety requirements and test methods	DD/ DT
DIN EN 1728 2014-02	Domestic furniture - Seating - Test methods for the determination of strength and durability	DD
DIN EN 1729-2 2016-03	Furniture - Chairs and tables for educational institutions - Part 2: Safety requirements and test methods	DD/ DT
DIN EN 1730 2013-01	Domestic furniture - Tables - Test methods for determination of strength, durability and stability	DD/ DT
DIN EN 1930 2012-02	Child use and care articles - Safety barriers - Safety requirements and test methods	DD
DIN EN 1957 2013-01	Domestic furniture - Beds and mattresses - Test methods for the determination of functional characteristics	DD

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DIN EN ISO 1923 1995-06	Cellular plastics and rubbers - Determination of linear dimensions	DD
DIN EN ISO 2439 2009-05	Flexible cellular polymeric materials - Determination of hardness (indentation technique)	DD
DIN EN ISO 2440 2015-02	Flexible and rigid cellular polymeric materials - Accelerated ageing tests	DD
DIN EN ISO 3385 2014-10	Flexible cellular polymeric materials - Determination of fatigue by constant-load pounding	DD
DIN EN ISO 3386-1 2015-10	Polymeric materials, cellular flexible - Determination of stress-strain characteristics in compression - Part 1: Low-density materials	DD
DIN EN ISO 3386-2 2010-09	Flexible cellular polymeric materials - Determination of stress-strain characteristics in compression - Part 2: High-density materials	DD
DIN EN 60601-2-52 2016-04	Adjustable beds for disabled persons - Requirements and test methods	DD
DIN 4543-1 1994-09	Office work place - Part 1: Space for the arrangement and use of office furniture; safety requirements, testing	DD
DIN 4547-1 2012-04	Wardrobes and compartment cupboards of steel - Part 1: Shapes, dimensions, designation, materials	DD
DIN 4547-2 2012-04	Wardrobes and compartment cupboard of steel - Part 2: Functional and safety requirements and testing	DD
DIN 4548 2016-10	Industrial steel storage and workshop cabinets - Design, functional and safety requirements, testing and evaluation	DD
DIN Technical Report 147 2006-06-12	Requirements and tests of office furniture - Guideline for the security requirements on work tables and storage furniture	DD/ DT
DIN 4556 2017-10	Office furniture - Footrests for working position - Requirements, dimensions	DD
DIN ISO 7170 2007-02	Furniture - Storage units - Determination of strength and durability	DD

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ISO 7171 1988-06	Furniture - storage units - Determination of stability	DD
ISO 7173 1989-07	Furniture - chairs and stools - Determination of strength and durability	DD
ISO 7174-1 1988-07	Furniture - chairs - Determination of stability - part 1: Upright chairs and stools	DD
ISO 7174-2 1992-10	Furniture - chairs - Determination of stability - part 2: chairs with tilting or reclining mechanism when fully reclined, and rocking chairs	DD
DIN EN ISO 7493 2006-08	Dentistry - Operator's stool	DD
DIN EN ISO 7214 2012-07	Cellular plastics - Polyethylene - Methods of test	DD
DIN EN ISO 8307 2008-03	Flexible cellular polymeric materials - Determination of resilience	DD
ISO 11752 2000-10	Flexible cellular polymeric materials - Moulded and extruded sponge or expanded cellular rubber products - Compressibility test on finished parts	DD
DIN EN 12221-2 2013-12	Changing units for domestic use - Part 2: Test methods	DD/ DT
DIN EN 12227 2010-12	Playpens for domestic use - Safety requirements and test methods	DD
DIN EN 12527 1999-05	Castors and wheels - Test methods and apparatus	DD
DIN EN 12530 1999-05	Castors and wheels - Castors and wheels for manually propelled institutional applications	DD
DIN EN 12727 2017-02	Furniture - Ranked seating - Requirements for safety, strength and durability	DD/ DT
DIN 12915 1994-02	Laboratory furniture - Sinks for laboratory benches	DD

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DIN 12916 1995-10	Laboratory furniture - Large size tiles for laboratory bench tops	DD
DIN 13013 1977-12	Latex foam hospital mattresses - Dimensions, requirements, testing	DD
DIN 13014 1977-12	Polyether foam hospital mattresses - Dimensions, requirements, testing	DD
DIN EN 13150 2001-12	Workbenches for laboratories - Dimensions, safety requirements and test methods	DD
ISO 13362 2000-11	Flexible cellular polymeric materials - Determination of compression set in humid conditions	DD
DIN EN 13453-2 2004-09	Furniture - Bunk beds and high beds - Part 2: Test methods	DD/ DT
DIN EN 13759 2012-06	Furniture - Operating mechanisms for seating and sofa-beds - Test methods	DD/ DT
DIN EN 14072 2004-02	Glass in furniture - Test methods	DD
DIN EN 14073-3 2004-11	Office furniture - Storage furniture - Part 3: Test methods for the determination of stability and strength of the structure	DD/ DT
DIN EN 14074 2004-11	Office furniture - Tables and desks and storage furniture - Test methods for the determination of strength and durability of moving parts	DD/ DT
DIN EN 14183 2004-03	Step stools	DD
DIN EN 14703 2007-07	Furniture - Links for non-domestic seating linked together in a row - Strength requirements and test methods	DD
DIN EN 14727 2006-03	Laboratory furniture - Storage units for laboratories - Requirements and test methods	DD
DIN EN 14749 2016-06	Domestic and kitchen storage units and worktops - Safety requirements and test methods	DD/ DT

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DIN EN 14988-2 2012-10	Children's high chairs - Part 2: Test methods	DD
DIN EN ISO 1798 2008-04	Flexible cellular polymeric materials - Determination of tensile strength and elongation at break	DD
DIN EN ISO 1856 2008-01	Flexible cellular polymeric materials - Determination of compression set	DD
DIN 68888 2009-06	Domestic furniture - Seating - Determination of durability of upholstery (Follow-up document to DIN V ENV 14443)	DD
DIN EN 15338 2010-06	Hardware for furniture - Strength and durability of extension elements and their components	DD/ DT
DIN EN 15570 2008-08	Hardware for furniture - Strength and durability of hinges and their components - Hinges pivoting on a vertical axis	DD/ DT
DIN EN 15706 2009-08	Hardware for furniture - Strength and durability of slide fittings for sliding doors and roll fronts (Follow-up document to DIN 68859)	DD
DIN EN 15828 2011-01	Hardware for furniture - Strength and durability of hinges and their components - Stays and hinges pivoting on a horizontal axis	DD
DIN EN 16122 2012-10	Domestic and non-domestic storage furniture - Test methods for the determination of strength, durability and stability	DD/ DT
DIN 16555 2002-12	Office work place - Space for communication work places in office buildings - Requirements, testing	DD
DIN EN 16139 2014-03	Furniture - Strength, durability and safety - Requirements for non-domestic seating	DD/ DT
DIN 16890 2017-08	Children's furniture - Mattresses for cots and cribs - Safety requirements and test methods	DD
DIN 18860-1 2000-06	Equipment for commercial kitchens - Working tables - Part 1: Open working tables, requirements and testing	DD
DIN 18860-2 2000-06	Equipment for commercial kitchens - Working tables - Part 2: Working tables with substructures, requirements and testing	DD

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ISO 21015 2007-06	Office furniture - Office work chair - Test methods for the determination of stability, strength and durability	DD
ISO 24999 2008-07	Flexible cellular polymeric materials - Determination of fatigue by a constant-strain procedure	DD
DIN 32623 2009-11	Hospital children's cots made from metal and plastic - Safety determinations and testing	DD
DIN 53579 2015-04	Testing of flexible cellular materials - Indentation test on finished parts	DD
DIN 68840 2004-06	Hardware for furniture - Cabinet suspension - Determination of nominal load carrying capacity	DD/ DT
DIN EN 16014 2011-10	Hardware for furniture - Strength and durability of locking mechanisms;	DD
DIN 68872 1976-01	Plastic Chair Shells for Indoor Use - Requirements, Testing	DD
DIN 68874-1 1985-01	Shelves and shelf bearers in cabinet furniture - Requirements and testing when mounted in the cabinet	DD/ DT
DIN EN 16337 2013-08	Shelves and shelf bearers in cabinet furniture - Part 2: Requirements and testing of shelf bearers	DD/ DT
DIN SPEC 68200 2016-05 draft	Furniture - Beds and mattresses - Test methods for the determination of functional mechanical characteristics of zone mattresses and zoned lying systems	DD
DIN 68707 2016-10	Plywood-manufactured moulds for seats	DD
DIN 68876 1980-10	Swivelling chair for housework, adjustable in height - Safety requirements, testing	DD
DIN 68877-2 2016-05	Swivelling work chair - Safety requirements, testing	DD
DIN 68878 2011-11	Chairs for domestic use - Performance characteristics - Requirements and test methods	DD/ DT

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DIN 68885 2016-10	Tables for domestic area - Requirements, testing	DD/ DT
DIN 68888 2009-06	Domestic furniture - Seating - Determination of durability of upholstery	DD
DIN 68930 2009-11	Kitchen furniture - Requirements and testing	DD
DIN 81402 2010-01	Hinges for ship's cabinet doors, for screwing-on for furniture doors	DD
DIN 81412 2012-08	Cupboard bolts, light type for furniture	DD
NF D60-300-1 2008-02	Furniture for young children - Part 1: General safety requirements for furniture for young children	DD
NF D60-300-2 2008-02	Furniture for young children - Part 2: Safety requirements and test methods for indoor and outdoor seating	DD
NF D60-300-3 2008-02	Furniture for young children - Part 3: Safety requirements and test methods for indoor and outdoor tables	DD
NF D62-100-1 2010-04	Furniture - Domestic use fixed platform mezzanine beds - Safety specifications and tests - Part 1: Safety specifications	DD
NF D62-100-2 2010-04	Furniture - Domestic use fixed platform mezzanine beds - Safety specifications and tests - Part 2: Test methods	DD
NF T56-114 1985-10	Plastics - Flexible cellular plastics - Dynamic fatigue test through repeated compressions at fixed deformation	DD
ANSI/BIFMA X5.1 2002	American National Standard for Office Furnishings - General Purpose Office Chairs	DD

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3.5 Special Areas of Testing (e.g. driver's seats and train seats)

DIN EN 862 2016-09	Packaging - Child-resistant packaging - Requirements and testing procedures for non-reclosable packages for non-pharmaceutical products	DD
DIN EN ISO 8317 2016-05	Child-resistant packaging - Requirements and testing procedures for reclosable packages	DD
DIN EN 15227 2011-03	Railway applications - Crashworthiness requirements for railway vehicle bodies (Section 6.4.1 relating to driver's and driver's assistant seats)	DD
UIC 566 1990-01	UIC codex 566 preliminary draft: Coaches; load cases - Section 4.2.1.1 to 4.2.1.3 (luggage rack, cane holder, clothes hook and seats)	DD
NF F31-119 1995-12	Railway rolling stock - Behaviour of rolling stock seats at static stress, fatigue stress, vibrations stress and shocks stress - (Sections 5.1, 5.2, 5.4, 5.5, 5.6 and 5.7) - Materiel roulant ferroviaire - Comportement des sièges aux sollicitations statiques, de fatigue, de vibrations et de chocs	DD
TL918281 2001-03	Prüfgrundlagen der Deutschen Bahn AG - Technische Lieferbedingungen für Form- und Schnittschaumteile aus offenzelligem Schaumstoff [Testing specifications of the Deutsche Bahn AG - Technical conditions of sale for moulded and cut foam parts made from open-cell foam]	DD
GruLaSi [seat basics] - rev. 1.4 2013-10	Prüfgrundlagen der Deutschen Bahn AG: Grundlagen für die Konstruktion und Prüfung von Fahrgastsitzen in Schienenfahrzeugen [Testing specifications of the Deutsche Bahn AG: Foundations for the construction and testing of passenger seats in railway vehicles]	DD
SAE J1454 2012-05	Dynamic durability testing of seat cushions for off-road work machines	DD
SAE J1051 2013-08	Force-deflection measurements of cushioned components of seats for off-road work machines	DD

4 Surface Testing (DD)

4.1 Surface resistance under Mechanical, Chemical and Thermal Load *

Test type	Measured variable / Test parameters	Measuring and testing range	Testing standard / Characteristic processes
Abrasion resistance	Rotations [number]	0 ... 99999	DIN EN 438-2; DIN EN 660-2; DIN EN 13329; DIN EN 13696; DIN EN 14323; DIN EN 14354; DIN EN 15185; DIN EN 15468; ISO 24338
	Mass [mg]	0 ... 500 g	
Scratch resistance	Force [N]	0.1 ... 10 N circular 1 ... 20 N linear	DIN EN 15186; DIN EN 438-2; DIN EN ISO 1518-1; DIN EN 14323 ÖNORM A 1605-12
	Width of scratch mark [µm]		
Impact resistance	Drop height [mm]	large sphere: 50 ... 1900 small sphere: 10 ... 600	DIN EN 438-2; DIN EN ISO 4211-4; DIN EN 13696; ISO 24335; IHD-W-425; ÖNORM A 1605-12
	Force [N]	0 ... 90	
	Diameter of mark of impact [mm]	0 ... 38 (42)	
	Visual evaluation (cracks)	not visible / visible	
Resistance to micro-scratches	Gloss	20°: > 70 GU 60°: 0 – 100 GU 85°: < 10 GU	DIN EN 438-2; DIN EN 16094 DIN CEN/TS 16611; IOS-TM-0002 IHD-W-466
	Visual evaluation of scratches	Evaluation levels	

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Test type	Measured variable / Test parameters	Measuring and testing range	Testing standard / Characteristic processes
Resistance to stains through chemical/ thermal load	Visual evaluation of existing changes to the surface (visibility of stains) [in degrees]	No change ... strong change Degree 0 (1) ... 5	DIN 68861-1; DIN EN 438; DIN EN 12720; DIN EN 13442; DIN EN 14323; DIN EN 12721; DIN EN 12722; DIN EN ISO 4211; DIN EN ISO 4211-2; DIN EN ISO 4211-3; IHD-W-427; IHD-W- 460; IHD-W- 477; IHD-W-481

*) smallest achievable uncertainty of measurement as regards the measured value

DIN 53160-1 2010-10	Determination of the colourfastness of articles for common use - Part 1: Test with artificial saliva
DIN 53160-2 2010-10	Determination of the colourfastness of articles for common use - Part 2: Test with artificial sweat
DIN 68861-1 2011-01	Furniture surfaces - Part 1: Behaviour at chemical influence
DIN EN 424 2002-04	Resilient floor coverings - Determination of the effect of simulated movement of a furniture leg
DIN EN 425 2002-08	Resilient and laminate floor coverings - Castor chair test
DIN EN 438-2 2016-06	High-pressure decorative laminates (HPL) - Sheets based on thermosetting resins (usually called laminates) - Part 2: Determination of properties
DIN EN 660-2 Amendment 1 2003-06	Resilient floor coverings - Determination of wear resistance - Part 2: Frick-Taber test
DIN EN 1399 1998-02	Resilient floor coverings - Determination of resistance to stubbed and burning cigarettes

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DIN EN 12720 2014-02	Furniture - Assessment of surface resistance to cold liquids
DIN EN 12721 2014-02	Furniture - Assessment of surface resistance to wet heat
DIN EN 12722 2014-02	Furniture - Assessment of surface resistance to dry heat
DIN EN 13329 2017-12	Laminate floor coverings - Elements with a surface layer based on aminoplastic thermosetting resins - Specifications, requirements and test methods
DIN EN 13442 2013-05	Wood flooring and wood panelling and cladding - Determination of the resistance to chemical agents
DIN EN 13489 2003-05	Wood flooring - Multi-layer parquet elements
DIN EN 13696 2009-02	Wood flooring - Test methods to determine elasticity and resistance to wear and impact resistance
DIN EN 13845 2017-10	Resilient floor coverings - Polyvinyl chloride floor coverings with particle based enhanced slip resistance - Specification
DIN EN 14323 2017-07	Wood-based panels - Melamine faced boards for interior uses - Test methods
DIN EN 14354 2017-11	Wood-based panels - Wood veneer floor coverings
DIN EN 15185 2011-07	Furniture - Assessment of the surface resistance to abrasion
DIN EN 15186 2012-01	Furniture - Assessment of the surface resistance to scratching
DIN EN 15468 2016-08	Laminate floor coverings - Elements with directly applied printing and resin surface layer - Specifications, requirements and test methods
DIN EN 16094 2012-04	Laminate floor coverings - Test method for the determination of micro-scratch resistance

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DIN EN ISO 1518-1 2011-09	Paints and varnishes - Determination of scratch resistance - Part 1: Constant-loading method
DIN CEN/TS 16611 2016-08	Furniture - Assessment of the surface resistance to microscratching
ISO 4211 1979-09	Furniture - Assessment of surface resistance to cold liquids
ISO 4211-2 2013-05	Furniture - Tests for surface finishes - Part 2: Assessment of resistance to wet heat
ISO 4211-3 2016-05	Furniture - Tests for surface finishes - Part 3: Assessment of resistance to dry heat
ISO 4211-4 1988-07	Furniture - Tests for surfaces - Part 4: Assessment of resistance to impact
ISO 24335 2006-03	Laminate floor coverings - Determination of impact resistance
ISO 24338 2014-12	Laminate floor coverings - Determination of abrasion resistance
IHD-W-423 2006-06	Bestimmung der Beständigkeit von leimfreien Verbindungssystemen an Fußböden oder verklebten Elementen bei mechanisch-dynamischer Belastung [Determination of the durability of the tongue and groove joints of laminate floorings and other floorings]
IHD-W-425 2016-03	Ermittlung der Stoßfestigkeit von Oberflächen [Determination of the impact resistance of surfaces]
IHD-W-427 2006-06	Möbel- und Fußböden - Ermittlung der Verschmutzungsneigung von Oberflächen [Furniture and flooring – Determination of the pollution resistance of surfaces]
IHD-W-460 2009-06	Bestimmung der Chemikalienbeständigkeit von Dekorfinishfolien [Determination of the chemical resistance of decor finish foils]
IHD-W-461 2009-06	Bestimmung der Abriebfestigkeit von Dekorfinishfolien [Determination of the resistance of decor finish foils to abrasion]
IHD-W-462 2009-06	Bestimmung der Kratzfestigkeit von Dekorfinishfolien [Determination of the scratch resistance of decor finish foils]

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IHD-W-466 2010-12	Bestimmung der Beständigkeit gegen Mikrokratzer bei Möbeloberflächen [Determination of resistance to micro-scratches of furniture surfaces]
IHD-W-467 2011-02	Determination of the abrasion resistance of printed floorings with grit feeder method
IHD-W-470 2017-07	Bestimmung der Kantenstoßfestigkeit von Türblättern [Determination of the edge impact resistance of door leaves]
IHD-W-471 2014-02	Bestimmung der Wischbeständigkeit von Türoberflächen [Determination of the wipe resistance of door surfaces]
IHD-W-475 2016-04	Bestimmung der Beständigkeit gegen Aufpolieren bei Laminatfußböden [Determination of the polishing resistance of laminate floor coverings]
IHD-W-477 2016-04	Bestimmung der Verschmutzungsneigung von Holzfußböden mit nicht filmbildenden Beschichtungen [Determination of the pollution resistance of wooden floors with non-filmforming coatings]
IHD-W-479 2016-04	Bestimmung der Abriebfestigkeit von Laminatbodenbelägen [Determination of the abrasion resistance of laminate floor coverings]
IHD-W-481 2016-04	Bestimmung der Beständigkeit gegenüber kalten Flüssigkeiten von Holzfußböden mit nicht filmbildenden Beschichtungen [Determination of the resistance to cold liquids of wooden floors with no film-forming coatings]
IOS-TM-0002 Version: AA-14884-10 2014-11	Surface resistance test methods
NALFA Standards Publication LF01-2011	Laminate Flooring - Specifications and Test Methods - North American Laminate Flooring Association
ÖNORM A 1605-12 2016-06	Furniture - Testing specifications - Part 12: Furniture surfaces
ÖNORM C 2350 2016-08	Coating materials for coating systems applied on dimensionally stable exterior building constructions of wood - Minimum requirements and tests
ÖNORM C 2354 2009-03	Transparent sealing materials for wooden floors and sealings made thereof - Minimum requirements and test methods

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4.2 Determination of Surface Characteristics *

Testing- and measuring devices / processes	Measurement parameters	Measurement range	Testing standard / Characteristic processes
Slip meter	Sliding friction coefficient μ	Friction value μ : 0.01...1	DIN 13893; DIN 51131: DIN EN 15534-1 CEN/TS 16165 Process D
Pendulum testing device	Slip / swinging length (pendulum test value)	0 ... 150 units	EN 1339 V DIN CEN/TS 15676 IHD-W-468 BS 7976-2 CEN/TS 16165 Process C
Testing equipment (inclined plane) with safety equipment	Total acceptance angle [°]	0°45°	DIN 13845; DIN 51097; DIN 51130 DIN EN 15534-1 CEN/TS 16165 Processes A and B

DIN 51097 1992-11	Testing of floor coverings - Determination of the anti-slip properties - Wet-loaded barefoot areas; walking method - Ramp test
DIN 51130 2014-02	Testing of floor coverings - Determination of the anti-slip property - Workrooms and fields of activities with slip danger, walking method - Ramp test
DIN 51131 2014-02	Testing of floor coverings - Determination of the anti-slip property - Method for measurement of the sliding friction coefficient
DIN 53236 1983-01	Testing of colouring materials - Conditions of measurement and evaluation for the determination of colour differences for paint coatings, similar coatings and plastics
DIN EN 382-1 1993-08	Fibreboards - Determination of surface absorption - Test method for dry process fibreboards
DIN EN 1339 2003-08	Concrete paving flags, requirements and test methods Annex I (normative)
E DIN EN 1339 2010-08	Process for the determination of the slip resistance value of unpolished spaces (USRV)

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DIN EN 13721 2004-10	Furniture - Assessment of the surface reflectance
DIN EN 13722 2004-10	Furniture - Assessment of the surface gloss
DIN EN 13893 2003-02	Resilient, laminate and textile floor coverings - Measurement of dynamic coefficient of friction on dry floor surfaces
DIN EN 20105-A02 1994-10	Textiles - Tests for colour fastness - Part A02: Grey scale for assessing change in colour
V DIN CEN/TS 15676 2008-02	Wood flooring - Slip resistance - Pendulum test
DIN CEN/TS 16165 2012-07	Determination of slip resistance of pedestrian surfaces – Method of evaluation
DIN EN ISO 105-X12 2016-11	Textiles - Tests for colour fastness - Part X12: Colour fastness to rubbing
DIN EN ISO 1522 2007-04	Paints and varnishes - Pendulum damping test
DIN EN ISO 2409 2013-06	Paints and varnishes - Cross-cut test
DIN EN ISO 2808 2007-05	Paints and varnishes - Determination of film thickness
DIN EN ISO 2813 2015-02	Paints and varnishes - Determination of specular gloss of non-metallic paint films at 20°, 60° and 85°
DIN EN ISO 3668 2001-12	Paints and varnishes - Visual comparison of the colour of paints
DIN EN ISO 4624 2016-08	Paints and varnishes - Pull-off test for adhesion
DIN EN ISO 9117-5 2012-11	Paints and varnishes - Drying tests - Part 5: Modified Bandow-Wolff test

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DIN EN ISO 4628-1 2016-07	Paints and varnishes - Valuation of degradation of coatings - Designation of quantity and size of defects, and of intensity of uniform changes in appearance - Part 1: General introduction and designation system
DIN EN ISO 4628-2 2016-07	Paints and varnishes - Evaluation of degradation of coatings - Designation of quantity and size of defects, and of intensity of uniform changes in appearance - Part 2: Assessment of degree of blistering
DIN EN ISO 4628-3 2016-07	Paints and varnishes - Evaluation of degradation of coatings - Designation of quantity and size of defects, and of intensity of uniform changes in appearance - Part 3: Assessment of degree of rusting
DIN EN ISO 4628-4 2016-07	Paints and varnishes - Evaluation of degradation of coatings - Designation of quantity and size of defects, and of intensity of uniform changes in appearance - Part 4: Assessment of degree of cracking
DIN EN ISO 4628-5 2016-07	Paints and varnishes - Evaluation of degradation of coatings - Designation of quantity and size of defects, and of intensity of uniform changes in appearance - Part 5: Assessment of degree of flaking
DIN EN ISO 4628-6 2011-12	Paints and varnishes - Evaluation of degradation of coatings - Designation of quantity and size of defects, and of intensity of uniform changes in appearance - Part 6: Assessment of degree of chalking by tape method
DIN EN ISO 4628-7 2016-07	Paints and varnishes - Evaluation of degradation of coatings - Designation of quantity and size of defects, and of intensity of uniform changes in appearance - Part 7: Assessment of degree of chalking by velvet method
DIN EN ISO 6504-3 2007-05	Paints and varnishes - Determination of hiding power - Part 3: Determination of contrast ratio of light-coloured paints at a fixed spreading rate
DIN EN ISO 14577-1 2015-11	Metallic materials - Instrumented indentation test for hardness and materials parameters - Part 1: Test method
DIN EN ISO 11998 2006-10	Paints and varnishes - Determination of wet-scrub resistance and cleanability of coatings
IHD-W-454 2009-06	Bestimmung der Dicke von Dekorfinishfolien [Determination of the thickness of decor finish foils]
IHD-W-455 2009-06	Bestimmung der flächenbezogenen Masse von Dekorfinishfolien [Determination of the grammage of decor finish foils]

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IHD-W-456 2009-06	Bewertung des Oberflächenglanzes von Dekorfinishfolien [Evaluation of the surface gloss of decor finish foils]
IHD-W-458 2009-06	Bestimmung der Opazität von Dekorfinishfolien [Determination of the opacity of decor finish foils]
IHD-W-459 2009-06	Bestimmung der Oberflächenspannung von Dekorfinishfolien (Testtintenmethode) [Determination of the surface tension of decor finish foils (test ink method)]
IHD-W-463 2009-06	Bestimmung der Tesafestigkeit von Dekorfinishfolien [Determination of the Tesa-adhesive strength of decor finish foils]
IHD-W-464 2009-06	Bewertung der Haftfestigkeit von Dekorfinishfolien [Evaluation of the adhesive strength of decor finish foils]
IHD-W-465 2010-09	Bestimmung der Dunkelvergilbungsneigung [Determination of dark yellowing]
IHD-W-468 2011-03	Bestimmung der Rutschfestigkeit von Oberflächen für den Außenbereich nach dem Pendelverfahren [Determination of slip resistance of surfaces for outside by the pendulum method]
VFF Data Sheet HO.03 2012-07	Anforderungen an Beschichtungssysteme für die werksseitige Beschichtung von Holz- und Holz-Metall-Fenstern, -Haustüren und -Fassaden [Requirements for coating systems for the in-factory coating of wood and wood/metal windows, house doors and façades]

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4.3 Environmental Simulations*

Testing- and measuring devices	Measurement parameters	Measurement range	Testing standard / Characteristic processes
Climatic chambers/ temperature test chambers/ climate chambers/	Evaluation according to: climatic ageing/ thermal ageing	KPK 400: -40 °C ... 95 °C 10 % ...95 % KPK 800: -40 °C ... 180 °C 10 % ... 95 % Climate chamber: 20 °C ... 30 °C 20 % ... 90 % Temperature test chamber: 30 °C ... 220 °C Floor heating cell 20 °C ... 30 °C 20 % ... 85 %	DIN 68930; ISO 24339; IHD-W-473; AMK Data Sheet 001; AMK Data Sheet 005
Exposure / weathering devices with xenon lamp	Irradiance at 300-400 nm	35 ... 136 W/m ² (S Boro/ Soda Lime filters) 40 ... 150 W/m ² (S Boro/S Boro filters) Black standard temp.: 40 °C ... 120 °C Humidity 10 ... 75 % (100 % in dark cycle)	DIN EN 438-2; DIN EN 15187; DIN EN 15534-1 DIN EN ISO 4892-2; DIN EN ISO 105-B02 DIN EN ISO 16474-2
Exposure / weathering devices with fluorescent UV lamps	Irradiance	UVA: 0.35 ... 1.55 W/m ² UVB: 0.35 ... 1.00 W/m ²	DIN EN 438-2; DIN EN 927-6; DIN EN ISO 4892-3; DIN EN 15534-1 DIN EN ISO 16474-3

DIN EN 669
1997-11

Resilient floor coverings - Determination of the dimensional stability of linoleum tiles caused by changes in atmospheric humidity

DIN EN 927-3
2012-10

Paints and varnishes - Coating materials and coating systems for exterior wood - Part 3: Natural weathering test

DIN EN 927-5
2007-03

Paints and varnishes - Coating materials and coating systems for exterior wood - Part 5: Assessment of the liquid water permeability

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DIN EN 927-6 2006-10	Paints and varnishes - Coating materials and coating systems for exterior wood - Part 6: Exposure of wood coatings to artificial weathering using fluorescent UV lamps and water
DIN EN 13647 2011-08	Wood flooring and wood panelling and cladding - Determination of geometrical characteristics
DIN EN 14085 2011-07	Resilient floor coverings - Specification for floor panels/assembly for loose laying
DIN EN 15187 2006-12	Furniture - Assessment of the effect of light exposure
DIN EN ISO 105-B02 2002-07	Textiles - Tests for colour fastness - Part B02: Colour fastness to artificial light: Xenon arc fading lamp test
DIN EN ISO 105-B02 2014-11	Textiles - Tests for colour fastness - Part B02: Colour fastness to artificial light: Xenon arc fading lamp test
DIN EN ISO 4892-2 2013-06	Plastics - Methods of exposure to laboratory light sources - Part 2: Xenon-arc lamps
DIN EN ISO 4892-3 2016-10	Plastics - Methods of exposure to laboratory light sources - Part 3: Fluorescent UV lamps
DIN EN ISO 16474-2 2014-03	Paints and varnishes - Methods of exposure to laboratory light sources - Part 2: Xenon-arc lamps
DIN EN ISO 16474-3 2014-03	Paints and varnishes - Methods of exposure to laboratory light sources - Part 3: Fluorescent UV lamps
ISO 24339 2006-05	Laminate and textile floor coverings - Determination of dimensional variations after exposure to humid and dry climate conditions
IHD-W-473 2016-04	Bestimmung der Fußbodenheizungsbeständigkeit von Fußbodenbelägen [Determination of underfloor heating resistance of floor coverings]
AMK Data Sheet 001 2007-07	Küchenmöbel - Ermittlung von Oberflächentemperaturen [Kitchen furniture - Determination of surface temperatures]
AMK Data Sheet 005 2015-04	Feuchte- und Klimabeständigkeit von Küchenmöbelbauteilen [Resistance of kitchen furniture components to humidity and climatic influences]

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4.4 Determination of the Electrostatic Properties of Surfaces

4.4.1 Testing of the antistatic behaviour of floors

DIN EN 1081 1998-04	Resilient floor coverings - Determination of the electrical resistance
DIN EN 1815 1998-01	Resilient and laminate floor coverings; Assessment of static electrical propensity
DIN EN 1815 2016-12	Resilient and laminate floor coverings; Assessment of static electrical propensity
DIN EN 14041 2008-05	Resilient, textile and laminate floor coverings - Essential characteristics
DIN EN 61340-4-1 2016-04	Electrostatics - Part 4-1: Standard test methods for specific applications - Electrical resistance of floor coverings and installed floors
IHD-W-453 2011-08	Bestimmung des elektrostatischen Verhaltens von Fußböden mittels „Apparativem Begehtest“ [Determination of the electrostatic behaviour of floorings by means of “Apparative Walk Test”]

4.4.2 Testing of the requirements for ESD protective elements

ANSI/ESD S20.20 2014	ESD association standard for the Development of an Electrostatic Discharge Control Program for - Protection of Electrical and Electronic Parts, Assemblies and Equipment (Excluding Electrically Initiated Explosive Devices)
ASTM D257 2014	Standard Test Methods for DC Resistance or Conductance of Insulating Material
DIN 51412-1 2005-06	Testing of petroleum products - Determination of the electrical conductivity - Part 1: Laboratory method
DIN 51412-2 2013-01	Testing of petroleum products - Determination of the electrical conductivity - Part 2: Field method
DIN EN 13463-1 2009-07	Non-electrical equipment for use in potentially explosive atmospheres - Part 1: Basic method and requirements - Annex D: Charging tests of non-conducting materials

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DIN EN 60079-0 2014-06	Explosive atmospheres - Part 0: Equipment - General requirements (at the same time VDE 0170-1)
IEC/ TS 60079-32-1 2013-08	Explosive atmospheres - Part 32-1: Electrostatic hazards, guidance
DIN EN 60079-32-2 2015-12	Explosive atmospheres - Part 32-2: Electrostatics hazards - Tests
DIN EN 60243-1 2014-01	Electric strength of insulating materials - Test methods - Part 1: Tests at power frequencies (IEC 60243-1:2013); (Limitation: No tests with alternating voltage)
DIN EN 60243-2 2014-08	Electric strength of insulating materials - Test methods - Part 2: Additional requirements for tests using direct voltage (IEC 60243-2:2013);
DIN IEC 60093 1993-12	Methods of test for insulating materials for electrical purposes - Volume resistivity and surface resistivity of solid electrical insulating materials
DIN EN 61340-2-3 2000-12	Electrostatics - Part 2-3: Methods of test for determining the resistance and resistivity of solid planar materials used to avoid electrostatic charge accumulation (= IEC 61340-2-3: 2000)
DIN EN 61340-2-3 2017-05	Electrostatics - Part 2-3: Methods of test for determining the resistance and resistivity of solid materials used to avoid electrostatic charge accumulation
DIN EN 61340-4-4 2015-11	Electrostatics - Part 4-4: Standard test methods for specific applications - Electrostatic classification of flexible intermediate bulk containers (FIBC)
DIN EN 61340-4-5 2005-03	Electrostatics - Part 4-5: Standard test methods for specific applications - Methods for characterizing the electrostatic protection of footwear and flooring in combination with a person
DIN EN 62631-3-1 2017-01	Dielectric and resistive properties of solid insulating materials - Part 3-1: Determination of resistive properties (DC methods) - Volume resistance and volume resistivity - General method (IEC 62631-3-1:2016), VDE 0307-3-1:2017-01
DIN EN 62631-3-2 2016-10	Dielectric and resistive properties of solid insulating materials - Part 3-2: Determination of resistive properties (DC Methods) - Surface resistance and surface resistivity (IEC 62631-3-2:2015), VDE 0307-3-2:2016-10
DIN EN ISO 80079-36 2016-12	Explosive atmospheres - Part 36: Non-electrical equipment for explosive atmospheres - Basic method and requirements

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Cenelec Technical Report TR 50404:2003	Electrostatics - Code of practice for the avoidance of hazards due to static electricity
TRGS 727 2016	Technical Rules for Hazardous Substances. "Preventing risks of ignition due to electrostatic charges" (previously TRBS 2153)
SAE J1645:2011	Fuel Systems and Components – Electrostatic Charge Mitigation

4.5 Determination of Fire Behaviour

4.5.1 Tests according to IMO Resolution MSC.307(88) - FTP Code 2010, Annex 1
(Ship safety; Int. code 2010 for the application of Fire Test Procedures)

IMO FTP Code 2010 Part 1	IMO Resolution MSC.307(88) - FTP Code 2010, Annex 1, Part 1: Non-combustibility test
IMO FTP Code 2010 Part 5	IMO Resolution MSC.307(88) - FTP Code 2010, Annex 1, Part 5 Test for surface flammability)

4.5.2 Miscellaneous

DIN EN ISO 4589-1 2017-08	Plastics - Determination of burning behaviour by oxygen index - Part 1: General requirements (ISO 4589-1:2017)
DIN EN ISO 4589-2 2017-11	Plastics - Determination of burning behaviour by oxygen index - Part 2: Ambient-temperature test (ISO 4589-2:2017)
DIN EN ISO 4589-3 2017-08	Plastics - Determination of burning behaviour by oxygen index - Part 3: Elevated-temperature test (ISO 4589-3:2017)
DIN 4102-1 1998-05	Fire behaviour of building materials and building components - Building materials - Concepts, requirements and tests. 6.2 Construction material class B2 (load from a small, defined flame (matchstick flame))
ISO 5660-1 2015-03	Reaction-to-fire tests - Heat release, smoke production and mass loss rate - Part 1: Heat release rate (cone calorimeter method) and smoke production rate (dynamic measurement)
ISO 5660-1 AMD 1 2019-08	Reaction-to-fire tests - Heat release, smoke production and mass loss rate - Part 1: Heat release rate (cone calorimeter method) and smoke production rate (dynamic measurement); Amendment 1

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ISO 5658-2
2006-09 Reaction to fire tests - Spread of flame - Part 2: Lateral spread on building and transport products in vertical configuration

5 Testing of Wooden Materials for the Evaluation and Review of Demands on Formaldehyde Emissions (DD)

according to

- **US-Environmental Protection Agency (EPA): Toxic Substances Control Act (TSCA) – TSCA Title VI – Final rule 40 CFR Part 770 – Formaldehyde Standards for Composite Wood Products¹⁾ and**
- **California Air Resources Board (CARB): California Code of Regulations Title 17 Sections 93120-93120.12– Airborne Toxic Control Measure to Reduce Formaldehyde Emissions from Composite Wood Products¹⁾**

EN 312
2010 Particleboards - Specifications

EN 622-5
2009 Fibreboards - Specifications -
Part 5: Requirements for dry process boards (MDF)

EN 636:2012+A1:2015 Plywood - Specifications

¹⁾ Confirmation of competence outside the scope of application of Regulation (EC) 765/2008

6 Testing of construction products (System 3 for the Evaluation and Review of Constancy of Performance) within the framework of Regulation (EU) No. 305/2011 for laying down harmonised conditions for the marketing of construction products (Construction Products Regulation) (DD)

Decision / Resolution of the committee	System ¹⁾	technical specification
1997/808/EC Floor coverings (2/2)	3	EN 14041:2004+AC:2006 Resilient, textile and laminate floor coverings - Essential characteristics
		EN 14342:2013 Wood flooring - Characteristics, evaluation of conformity and marking
1998/437/EC Internal and external wall and ceiling finishes	3	EN 438-7:2005 High-pressure decorative laminates (HPL) - Sheets based on thermosetting resins (Usually called laminates) - Part 7: Compact laminate and HPL composite panels for internal and external wall and ceiling finishes
		EN 14915:2013 Solid wood panelling and cladding - Characteristics, evaluation of conformity and marking
1999/93/EC Doors, windows, shutters, blinds, gates and related building hardware	3	EN 14351-1:2006+A2:2016 Windows and doors - Product standard, performance characteristics - Part 1: Windows and external pedestrian doorsets without resistance to fire and/or smoke leakage characteristics, replacement for EN 14351-1:2006
1999/91/EC Thermal insulation products (1/2)	3	EN 13162:2012+A1:2015 Thermal insulation products for buildings - Factory made mineral wool (MW) products - Specification
		EN 13163:2012+A1:2015 Thermal insulation products for buildings - Factory made expanded polystyrene (EPS) products

Decision / Resolution of the committee	System ¹⁾	technical specification
<p>1999/91/EC Thermal insulation products (1/2)</p>	3	<p>EN 13164:2012+A1:2015 Thermal insulation products for buildings - Factory made extruded polystyrene foam (XPS) products</p>
		<p>EN 13165:2012+A2:2016 Thermal insulation products for buildings - Factory made rigid polyurethane foam (PU) products</p>
		<p>EN 13166:2012+A2:2016 Thermal insulation products for buildings - Factory made phenolic foam (PF) products - Specification</p>
		<p>EN 13167:2012+A1:2015 Thermal insulation products for buildings - Factory made cellular glass (CG) products - Specification</p>
		<p>EN 13168:2012+A1:2015 Thermal insulation products for buildings - Factory made wood wool (WW) products - Specification</p>
		<p>EN 13169:2012+A1:2015 Thermal insulation products for buildings - Factory made expanded perlite board (EPB) products - Specification</p>
		<p>EN 13170:2012+A1:2015 Thermal insulation products for buildings - Factory made products of expanded cork (ICB) - Specification</p>
		<p>EN 13171:2012+A1:2015 Thermal insulation products for buildings - Factory made expanded perlite board (EPB) products - Specification</p>

¹⁾ System of assessment and verification of consistency of performance

The requirements placed on the testing laboratory and in accordance with Article 43 of the Construction Products Regulation were met. Testing methods which are required for the determination of the product type and which cannot be carried out by the certificate holder themselves are presented in the list of subcontractors.

Without prior approval by the DAkKS German Accreditation Body, the testing laboratory body is permitted to use new revisions of harmonised technical specifications.

7 Testing of Fire Behaviour and the Emission of Dangerous Substances from Construction Products which does not require a Reference to a Relevant Harmonised Technical Specification Point 3. Annex V, (EU) No. 305/2011) (DD)

7.1 Fire Behaviour (reaction to fire)

EN ISO 1182 2010	Reaction to fire tests for products - Non-combustibility tests
EN ISO 1716 2018	Reaction to fire tests for products - Determination of the gross heat of combustion (calorific value)
EN ISO 9239-1 2010	Reaction to fire tests for floorings - Part 1: Determination of the burning behaviour using a radiant heat source
EN ISO 11925-2 2020	Reaction to fire tests - Ignitability of products subjected to direct impingement of flame - Part 2: Single-flame source test

in conjunction with:

EN 13501-1 *Fire classification of construction products and building elements - Part 1: Classification using data from reaction to fire tests*

7.2 Emission of Dangerous Substances

EN 16516 2017	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.

Abbreviations used:

AMK	Arbeitsgemeinschaft Die Moderne Küche [The Modern Kitchen Working Group] e.V.
ANSI/ESD	American National Standards Institute/Electro-static-discharge
ASTM	American Society for Testing and Materials
BN	Bahnnorm [Railway Standard]
CEN	Comité Européen de Normalisation [European Committee for Standardization]
DIBt	Deutsches Institut für Bautechnik [German Institute for Building Technology]
DIN	Deutsches Institut für Normung [German Institute for Standardization] e.V.
ENV	European Preliminary Standard
EPLF	Association of European Producers of Laminate Flooring
ETB	Introduction of technical rules as Technical Building Regulations
GKV	Gesamtverband Kunststoffverarbeitende Industrie [German Association of the Plastics Converters] e.V.
IEC	International Electrotechnical Commission
IHD-VA + W	In-house procedures of the Institut für Holztechnologie Dresden [Dresden Institute for Wood Technology]
IMO FTP	International Maritime Organisation- Fire Test Procedures
ISO	International Organization for Standardization
JIS	Japanese Industrial Standard
NF	Normes francaises [French Norms]
ÖNORM	Österreichische Norm [Austrian Standard]
TRGS	Technische Regel für Gefahrstoffe [Technical Rules for Hazardous Substances]
TL	Technical delivery conditions
UIC	Union internationale des chemins de fer [International Union of Railways]
VDI	Verband Deutscher Ingenieure [Association of German Engineers]
VFF	Verband der Fenster- und Fassadenhersteller [Association for Manufacturers of Windows and Façades]