

“Deutsche Akkreditierungsstelle GmbH“

Annex to the Accreditation Certificate D-PL-11349-01-00 according to DIN EN ISO/IEC 17025:2018

Valid from: 21.12.2021

Date of issue: 21.12.2021

Holder of certificate:

ift Rosenheim GmbH

with its sites:

**Theodor-Gietl-Straße 7-9, 83026 Rosenheim
Am Oberfeld 21, 83026 Rosenheim
Lackermannweg 26, 83071 Stephanskirchen**

Tests in the fields:

building physics, safety and security, fire protection and serviceability (fitness for use) of windows, facades, doors (pedestrian doors), frames, industrial, commercial and garage doors and gates, non-loadbearing external walls, blinds and shutters (roller shutters, solar protection), light channelling systems as well as accessories and building materials such as insulating glass units, flat glass (toughened safety glass, laminated safety glass, heat-strengthened glass), frame profiles, material composites, locks and hardware, power-operated windows and pedestrian doors, insulating materials, adhesives, coatings, sealing strips and sealing profiles

Testing of construction products in accordance with Construction Products Regulation (EU) No. 305/2011 to define harmonised conditions for the marketing of construction products (Construction Products Regulation)

Testing of reaction to fire and noise absorption of construction products for which the reference to a relevant harmonised technical specification is not required (point 3, Annex V, (EU) no. 305/2011)

The requirements for the management system in DIN EN ISO/IEC 17025 are written in a language relevant for testing laboratories and are overall in accordance with the principles of DIN EN ISO 9001.

This certificate including the certificate 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 the Deutsche Akkreditierungsstelle GmbH (DAkkS). <https://www.dakks.de/content/datenbank-akkreditierter-stellen>.

The test methods are indicated with the following abbreviations for sites, in which they are performed respectively:

Rosenheim = R Stephanskirchen = S Am Oberfeld 21, Rosenheim Technologie Zentrum = TZ

Within the accreditation scopes marked with *, the testing laboratory is only permitted to use the standardised test methods or test methods equivalent to them listed here with different edition statuses, without requiring prior information and approval by the DakkS (German Accreditation Body).

Within the test areas marked with **, the testing laboratory is permitted to freely select standardised test methods or test methods equivalent to them , without requiring prior information and approval by the DAkKS.

Within the test areas marked with *, the testing laboratory is permitted to modify, refine and develop new test methods without requiring prior information and approval by the DakkS. The listed test methods are exemplary.**

A current list of all testing methods in the flexible accreditation scope is maintained by the testing laboratory.

1 Fitness for use and ageing of construction products building components and accessories
e.g. windows, external and internal pedestrian doors, frames, door leaves, industrial, commercial and garage doors, facades, non-loadbearing external walls, conservatories, NSHV, air tight fire and smoke control doors and shutters (e.g. smoke control doors and shutters, damper,s etc.), locks, hardware

1.1 Fitness for use, tightness-und pressure tests ***

DIN EN 1026 2016-09	Windows and doors - Air permeability - Test method	R
DIN EN 1027 2016-09	Windows and doors - Water tightness - Test method	R
DIN EN 1294 2000-07	Door leaves - Determination of the behaviour under humidity variations in successive uniform climates	R
DIN EN 12114 2000-04	Thermal performances of buildings - Air permeability of building components and building elements - Laboratory test method	R

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DIN EN 12153 2000-09	Curtain walling - Air permeability - Test method	R
DIN EN 12155 2000-10	Curtain walling - Watertightness - Laboratory test under static pressure	R
DIN EN 12179 2000-09	Curtain walling - Resistance to wind load - Test method	R
DIN EN 12211 2016-10	Windows and doors - Resistance to wind load - Test method	R
DIN EN 12427 2000-11	Industrial, commercial and garage doors and gates - Air permeability - Test method	R
DIN EN 12445 2001-02	Industrial, commercial and garage doors and gates – Safety in use of power operated doors – Test methods	R
DIN EN 12453 2017-11	Industrial, commercial and garage doors and gates - Safety in use of power operated doors - Requirements and test methods	R
DIN EN 12489 2000-11	Industrial, commercial and garage doors and gates - Resistance to water penetration - Test method	R
DIN EN 12604 2017-10	Industrial, commercial and garage doors and gates - Mechanical aspects - Requirements and test methods	R
DIN EN 12605 2000-08	Industrial, commercial and garage doors and gates - Mechanical aspects - Test methods	R
DIN EN 12865 2001-07	Hygrothermal performance of building components and building elements - Determination of the resistance of external wall systems to driving rain under pulsating air pressure	R
DIN EN 12978 2009-10	Industrial, commercial and garage doors and gates - Safety devices for power operated doors and gates - Requirements and test methods (Here only: Clauses. 7.7.1.1, 7.7.1.3, 7.8, 7.9, 7.12, 7.13)	R

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DIN EN 13050 2011-09	Curtain Walling - Watertightness - Laboratory test under dynamic condition of air pressure and water spray	R
DIN EN 13051 2001-11	Curtain walling - Watertightness - Site test	R
DIN EN 13141-1 2004-05	Ventilation for buildings - Performance testing of components/products for residential ventilation - Part 1: Externally and internally mounted air transfer devices	R
DIN EN 14201 2004-04	Blinds and shutters - Resistance to repeated operations (mechanical endurance) - Methods of testing	R
DIN EN 14963 2006-12 + Berichtigung 1 2007-06	Roof coverings - Continuous rooflights of plastics with or without upstands - Classification, requirements and test methods; Corrigenda to DIN EN 14963:2006-12	R
DIN EN 1873 2006-03	Prefabricated accessories for roofing - Individual roof lights of plastics - Product specification and test methods	R
DIN EN 1873 2016-07	Prefabricated accessories for roofing - Individual rooflights of plastics - Product specification and test methods; German version EN 1873:2014+A1:2016	R
DIN EN 1932 2013-09	External blinds and shutters - Resistance to wind loads - Method of testing and performance criteria	R
DIN EN12444 2001-02	Industrial, commercial and garage doors and gates - Resistance to wind load - Testing and calculation	R
DIN 4103-1 2015-06	Internal non-loadbearing partitions - Part 1: Requirements and verification	R, S
DIN 68706-1 2002-02	Interior doors made from wood and wood-based panels - Part 1: Door leaves; Concepts, sizes, requirements	R
DIN 68706-2 2002-02	Interior doors made from wood and wood-based panels - Part 2: Door crozes; Concepts, sizes, installation	R
AAMA 501.1 2005	Standard Test Method for Exterior Windows, Curtain Walls and Doors for Water Penetration Using Dynamic Pressure	R

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AAMA 501.2 2015	Quality Assurance and Diagnostic Water Leakage - Field Check of Installed Storefronts, Curtain Walls and Sloped Glazing Systems	R
AAMA 501.5 2007	Test Method for Thermal Cycling of Exterior Walls	R
AAMA 501-15 2015	Methods of tests for exterior walls	R
ASTM E 283 2004 (2012 reapproved)	Standard Test Method for Determining Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen	R
ASTM E 330/E 330 M 2014	Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference	R
ASTM E 331 2000 (2009 reapproved, 2016 reapproved)	Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Air Pressure Difference	R
ASTM E 547 2000	Standard test method for water penetration of exterior windows, skylights, doors and curtain walls by cyclic static air pressure difference	(R)
NAFS 2011	North American fenestration standard for windows, doors and skylines (AAMA/WDMA/CSA 101/1.S.2/A440)	(R)
RAL-GZ 426 2014-07	Internal pedestrian doors made of wood and wood based panel products - Quality control - Part I: Door leaves	R
RAL-GZ 695 2010-05	Quality regulations and test specifications for windows, external pedestrian doors, curtain walling and conservatories	R
RAL-GZ 716 2013-04	Quality regulations and test specifications for PVC window profile systems	R
ift-Guideline FE-07/1 2005-10	Floodwater resistance of windows and doors Requirements, Testing, Classification	R

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ift- Guideline MO-01/1 2007-01	Wall connection of windows - Part 1 Method to determine the fitness for use of weatherproofing systems	R
ift- Guideline MO-01/2 2015-06	Wall connection of windows – Part 2 Procedure for determining the fitness for use of fastening systems	R
ift- Guideline MO (PUR) Assembly foam 2010-04 (Entwurf)	Testing of PUR foam for mounting of door frames for internal doors from wood and wood composite materials (Draft)	R
ift- Guideline FE-06/2 2017-02	Testing of mechanical and butt-welded T-connections for PVC windows	R
ift- Guideline FE-13/1 2011-04	Suitability of PVC profiles for windows – Testing and classification	R
ift- Guideline VE-08/4 2017-03	Basis for the evaluation of direct glazing systems	R

The test ranges listed in the following table are characterised by the specified test methods.

Type of test	Test parameter	Test range
Test rig „Tightness and wind load“ possibly as special design with additional testing devices (e.g. fan, anemometer)	Pressure air (wind)	p: -3 bis -10000 Pa +3 bis +10000 Pa
	Flow rate air	\dot{V} : $0,1 \frac{m^3}{h} - 950 \frac{m^3}{h}$
	Flow rate water	\dot{V} : $3 \frac{l}{min} - 500 \frac{l}{min}$
	Velocity air (wind)	v: $0,6 \frac{m}{s} - 40 \frac{m}{s}$
Rotameter	Flow rate air	\dot{V} : $15 \frac{l}{h} - 150 \frac{l}{h}$
Test rig for high water levels	Height of the water	from 1 mm level of water

Type of test	Test parameter	Test range
Calculation software „CFD flow calculation“ (Computational-Fluid-Dynamic) for e.g. EN 12101-2 ; EN 13141, ift-Guideline LU-01/1	Aerodynamic parameter: -Mass flow m (in kg/s) - Volume flow v (in m ³ /s) - Flow rate coefficient c	Unrestricted, however, in accordance with and/or following the test parameters/boundary conditions laid down in the test methods

1.2 Operability, continuous performance, and resistance against ageing under mechanical and environmental influences ***

DIN EN 947 1999-05	Hinged or pivoted doors - Determination of the resistance to vertical load	R
DIN EN 948 1999-11	Hinged or pivoted doors - Determination of the resistance to statictorsion	R
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	R
DIN EN 950 1999-11	Door leaves - Determination of the resistance to hard body impact	R
DIN EN 951 1999-05	Door leaves - Method for measurement of height, width, thickness and squareness	R
DIN EN 952 1999-11	Door leaves - General and local flatness - Measurement method	R
DIN EN 1191 2013-04	Windows and doors - Resistance to repeated opening and closing - Test method	R
ASTM E2068 2000	Standard test method for determination of operating force of sliding windows and doors	R
DIN EN 12046-1 2004-04	Operating forces - Test method - Part 1: Windows	R

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DIN EN 12046-2 2000-12	Operating forces - Test method - Part 2: Doors		R
DIN EN 13126-1 2012-02	Building hardware - Hardware for windows and door height windows - Requirements and test methods - Part 1: Requirements common to all types of hardware	R	R
DIN EN 13126-2 2011-12	Building hardware - Requirements and test methods for windows and door height windows - Part 2: Window fastener handle		R
DIN EN 13126-3 2012-02	Building hardware - Hardware for windows and door height windows - Requirements and test methods - Part 3: Handles, primarily for Tilt and Turn, Tilt-First and Turn-Only hardware		R
DIN EN 13126-4 2009-01	Building hardware - Requirements and test methods for windows and doors height windows - Part 4: Espagnolettes		R
DIN EN 13126-5 2015-01	Building hardware - Hardware for windows and balcony doors - Requirements and test methods - Part 5: Devices that restrict the opening of windows and door height windows		R
DIN EN 13126-6 2009-02	Building hardware - Requirements and test methods for windows and doors height windows - Part 6: Variable geometry stay hinges (with or without a friction stay);		R
+ FprEN 13126-6 2017-10	Building hardware - Hardware for windows and door height windows - Requirements and test methods - Part 6: Variable geometry stay hinges (with or without a friction stay)		
DIN EN 13126-7 2007-12	Building hardware - Requirements and test methods for windows and door height windows - Part 7: Finger catches		R
DIN EN 13126-8 2006-05 EN 13126-8 2017-11	Building hardware - Hardware for windows and door height windows - Part 8: Requirements and test methods for Tilt and Turn, Tilt-First and Turn-Only hardware		R
DIN EN 13126-9 2013-04	Building hardware - Hardware for windows and door height windows - Requirements and test methods - Part 9: Hardware for horizontal and vertical pivot windows		R
DIN EN 13126-10 2009-02	Building hardware - Requirements and test methods for windows and doors height windows - Part 10: Arm-balancing systems		R

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DIN EN 13126-11 2009-02	Building hardware - Requirements and test methods for windows and doors height windows - Part 11: Top hung projecting reversible hardware	R
DIN EN 13126-12 2009-03	Building hardware - Requirements and test methods for windows and doors height windows - Part 12: Side hung projecting reversible hardware	R
DIN EN 13126-13 2012-08	Building hardware - Hardware for windows and balcony doors Requirements and test methods - Part 13: Sash balances	R
DIN EN 13126-14 2012-08	Building hardware - Hardware for windows and balcony doors Requirements and test methods - Part 14: Sash fasteners	R
DIN EN 13126-15 2008-04	Building hardware - Requirements and test methods for windows and doors height windows - Part 15: Rollers for horizontal sliding and sliding folding windows and doors	R
DIN EN 13126-16 2008-04	Building hardware - Requirements and test methods for windows and doors height windows - Part 16: Hardware for Lift&Slide windows and doors	R
DIN EN 13126-17 2008-04	Building hardware - Requirements and test methods for windows and doors height windows - Part 17: Hardware for Tilt&Slide windows and doors	R
DIN EN 13126-19 2011-05	Building hardware - Requirements and test methods for windows and door height windows - Part 19: Sliding Closing Devices	R
DIN EN 13527 2001-01	Shutters and blinds - Measurement of operating force – Test methods	R
DIN EN 14608 2004-09	Windows - Determination of the resistance to racking (Racking) (partial replacement for DIN EN 107)	R
DIN EN 14609 2004-09	Windows - Determination of the resistance to static torsion (partial replacement for DIN EN 107)	R

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DIN 4102-18 1991-03	Fire behaviour of building materials and components - Part 18: fire barriers, verification of automatic closure (continuous performance test)	R
AAMA 501-4 Revision 2009	Recommended Static Test Method for Evaluating Curtain Wall and Storefront Systems Subjected to Seismic and Wind Induced Interstory Drift	R
AAMA 501-6 Revision 2009	Recommended Dynamic Test Method for Determining the Seismic Drift Causing Glass Fallout from a Wall System	R
AAMA 501.7 2017	Recommended static test method for evaluating windows, window wall, curtain wall and storefront systems subjected to vertical inter-story movements	R
RAL-GZ 607-3 2009-02	Turn and tilt and turn hardware – Quality control	R

The test ranges listed in the following table are characterised by the specified test methods.

Type of Test	Test parameter	Test range
- Durability test unit (incl. Measuring devices for velocity, force and torque) - Multi-function-assembly walls -Weighing balance	Mechanical ageing (e.g. continuous performance / durability) - Visual inspection - Performance check - Displacement	Velocity (reference velocity) v: $\pm 0,02 \frac{m}{s} - 0,7 \frac{m}{s}$
- Multi-function assembly walls - Hanging scale - Force gauge - Pneumatical/ hydraulical load transmission - Weighing balance	Mechanical ageing (e.g. Racking, Torsion, Operating forces) - Visual inspection - Performance check - Displacement	Force F: 100 N - 1000 N Torque M: 2 to 20 Nm Mass (loading) m: up to 400 kg
- Force gauge	Force	F: 20 - 500 N
- Torque gauge	Torque	M: 0,5 - 120 Nm

1.3 Testing of serviceability and ageing behaviour of accessories / building components ***
e.g. hinges, locks, door fittings, door protective devices, window fittings etc.

DIN EN 179 2008-04 EDIN EN 179 2017-01	Building hardware - Emergency exit devices operated by a lever handle or push pad, for use on escape routes - Requirements and test methods	R
DIN EN 1125 2008-04 EDIN EN 1125 2017-01	Building hardware - Panic exit devices operated by a horizontal bar, for use on escape routes - Requirements and test methods	R
DIN EN 1154 2003-04 + Berichtigung 1 2006-06 + Beiblatt 1 2003-11	Building hardware - Controlled door closing devices - Requirements and test methods: + Corrigendum 1 + Supplement 1	R
DIN EN 1303 2015-08	Building hardware - Cylinders for locks - Requirements and test methods	R
DIN EN 1527 2013-03	Building hardware - Hardware for sliding doors and folding doors - Requirements and test methods	R
DIN EN 1906 2012-12	Building hardware - Lever handles and knob furniture - Requirements and test methods	R
DIN EN 1935 2002-05	Building hardware - Single-axis hinges - Requirements and test methods	R
DIN EN ISO 6988 1997-03	Metallic and other non-organic coatings - Sulfur dioxide test with general condensation of moisture	R
DIN EN 12209 2016-10	Building hardware - Mechanically operated locks and locking plates- Requirements and test methods	R

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DIN EN 13637 2015-12	Building hardware - Electrically controlled exit systems for use on escape routes - Requirements and test methods	R
DIN EN 14648 2007-12	Building hardware - Fittings for shutters - Requirements and test methods	R
DIN EN 14846 2008-11 prEN 14846 2015-07	Building hardware - Locks and latches – Electromechanically operated locks and striking plates - Requirements and test methods	R
DIN EN 15684 2013-01	Building hardware - Mechatronic cylinders - Requirements and test methods	R
E DIN EN 15685 2011-04	Building hardware - Multipoint locks and their locking plates - Requirements and test methods	R
DIN EN 16005 2013-01 + Berichtigung 1 2015-10	Power operated pedestrian doorsets - Safety in use - Requirements and test methods + Corrigendum 1	R
DIN 18250 2006-09	Locks - Mortise locks for fire doors and smoke control doors	R
DIN 18251-1 2002-07	Locks - Mortise locks- Part 1: Mortise locks for rebated doors	R
DIN 18251-2 2002-11	Locks - Mortise locks - Part 2: Mortise locks for tube frame doors	R
DIN 18251-3 2002-11	Locks - Mortise locks - Part 3: Mortise locks as multipoint locks	R
DIN 18252 2006-12 (hist.)	Profile cylinders for door locks - Terminology, dimensions, requirements and marking	R

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DIN 18267 2015-02	Window handles - Clickable and lockable window handles	R
DIN 18273 2015-07	Building hardware - Lever handle units for fire doors and smoke control doors - Terms and definitions, dimensions, requirements, testing and marking	R
EAD 020001-01-0405 2017-03	Multi-axis concealed hinge assemblies	R
DIN 18255 2002-05	Profile cylinders for door locks - Terminology, dimensions, requirements and marking	R
DIN 18257 2003-03	Building hardware - Security plates - Definitions, measurements, requirements, marking	R
QM328 – Anlage 2 2018-01	ift in-house method – Combination tests in accordance with EN 13126-8:2017 and EN 1191:2012 according to QM328 “Hardware”	R
QM342 – Anlage 2 2018-01	ift in-house method – Durability test of locks and multi-point locking systems (Testing with relevant characteristics of EN 1191:2012) to ensure the exchangeability in the field of durability test according to QM342 „Locks“	R

The test ranges listed in the following table are characterised by the specified test methods

Type of Test	Test parameter	Test range	Typical test method
Mechanical durability, durability of operational reliability, sustainability	Mechanical ageing	Velocity (reference velocity) v: $\pm 0,02 \frac{m}{s} - 2,0 \frac{m}{s}$ Deformation (displacement) 0,1 mm – 10 m	EN1191 EN13126-8 EN13126-16 EN1125 EN179 EN1154 EN1303 EN 12209
Operating forces Release force Re-engaging force Vertical/horizontal load Static torsion Retention force	Force	10 N - 50 kN	EN 12046-1 EN12046-2 EN13527 EN 179, EN 1125 EN14608 EN 14609 EN947,EN948 EN 12209
Operating forces Opening and closing moment Key strength	Torque	0,5 Nm - 500 Nm	EN 12046-1 EN12046-2 EN 1154, EN 1125 EN179,EN1303 EN 12209
Pendulum test incl. soft impact Hard impact Weight	Mass	5 kg- 500 kg	EN13049 EN 14019 EN949 EN 950

1.4 Compressive and tensile strengths of accessories, building components and materials***
e.g. adhesives/sealants; frame profiles (material joints); wood and wood materials; welding corner joints, glass

DIN EN ISO 12543-4
2012-11 Glass in building - Laminated glass and laminated safety glass - Part 4: Test methods for durability R

DIN EN 320
2011-07 Particleboards and fibreboards - Determination of resistance to axial withdrawal of screws R

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DIN EN 205 2016-12	Adhesives - Wood adhesives for non-structural applications - Determination of tensile shear strength of lap joints	R
DIN EN 1288-3 2000-09	Glass in building - Determination of the bending strength of glass - Part 3: Test with specimen supported at two points (four point bending)	R
E DIN EN 1288-3 2007-10	Glass in building - Determination of the bending strength of glass Part 3: Test with specimen supported at two points (four point bending)	R
DIN EN 14024 2005-01	Metal profiles with thermal barrier - Mechanical performance - Requirements, proof and tests for assessment	R
AAMA TIR 505-09 2009-11	Dry shrinkage and composite performance thermal cycling test procedure	R
DIN EN 14256 2007-10	Adhesives for non-structural wood applications - Test method and requirements for resistance to static load	R
DIN EN 14257 2006-09	Adhesives - Wood adhesives - Determination of tensile strength of lap joints at elevated temperature (WATT'91)	R
DIN 18516-4 1990-02	Back-ventilated, non-loadbearing, external enclosures of buildings, made from tempered safety glass panels	R
ETAG 002-1 2012-05 (Amended version)	Guideline for European technical approval of Structural Sealant Glazing Kits (SSGK) - Part 1: Supported and unsupported systems	R
ETAG 002-3 2002-03	Guideline for European technical approval of Structural Sealant Glazing Kits (SSGK) - Part 3: Systems incorporating profiles with a thermal barrier	R
“DIBt-Mitteilung 6/ 17 Jg.“ (Communications) 1986- 08	Testing of stability of metal-plastic composite profiles with thermal barrier	R

EN DIN EN 17146 2019-04	Determination of the strength of infill supports - Test method and requirements	R
“DIBt-Mitteilung 5/2004“ 2004-10 (Communications)	(Support zones) Verification of usability for mechanical connections in stick construction with facade elements with linear support	R
DIN EN 16758 2016-06	Curtain walling - Determination of the strength of sheared connections - Test method and requirements	R
ift- Guideline FE-08/1 2008-05	Corner joints for wood windows - Requirements, testing and assessment	R
ift- Guideline FE-09/1 2009-09	Weldable-corner-connector (for external ped. doors and windows)- Requirements, testing and assessment	R
ift- Guideline HO-10/1 2002-11	Solid, Finger-jointed and Laminated Profiles for Wooden Windows - Requirement and Testing	R
GG SB TBDK- Directive 2014-05	Directive - Attachment of supporting fitting components for turn-only and tilt&turn fittings with definitions for turn-only and tilt&turn fittings and their possible installation positions	R

The test ranges listed in the following table are characterised by the specified test methods.

Type of Test	Test parameter	Test range
Tensile testing machines	Force measurement	Force: 100 to 5000 N 2000 to 100000 N up to 400 mm
Callipers, measuring tapes	Displacement	Displacement/length: 0,01 to 10000 mm
FEM-calculation software „Stability“ (Finite Element Method) e.g. for glazings acc. to E DIN 18008-4	Static parameters: - Deformation ϵ in (m/m) - Stress σ in (N/m ²)	Unrestricted, however as per/ based on the parameter/boundary conditions defined in the test methods/standards

1.5 Serviceability, material analyses, ageing behaviour due to material and environmental influences of accessories/building components ***

e.g. varnish, paints, coatings, sealants, sealing profiles, insulating materials, adhesives, glass and glass composites, wood and wood materials, frame profile (material composite)

DIN EN ISO 2931 2010-12	Anodizing of aluminium and its alloys - Assessment of quality of sealed anodic oxide coatings by measurement of admittance or impedance	R
DIN EN ISO 1463 2004-08	Metallic and oxide coatings - Measurement of coating thickness - Microscopical method	R
DIN EN ISO 1519 2011-04	Paints and varnishes - Bend test (cylindrical mandrel)	R
DIN EN ISO 1520 2007-10	Paints and varnishes - Cupping test	R
DIN EN ISO 2409 2013-06	Paints and varnishes - Cupping test	R
DIN EN ISO 2360 2004-04	Non-conductive coatings on non-magnetic electrically conductive basis materials - Measurement of coating thickness - Amplitude-sensitive eddy current method	R
DIN EN ISO 2810 2004-10	Paints and varnishes - Natural weathering of coatings – Exposure and assessment	R
DIN EN ISO 4590 2016-12	Rigid cellular plastics - Determination of the volume percentage of open cells and of closed cells (ISO 4590 2002)	R
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	R
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	R

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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	R
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	R
DIN EN ISO 7389 2004-04	Building construction - Jointing products - Determination of elastic recovery of sealants	R
DIN EN ISO 7390 2004-04	Building construction - Jointing products - Determination of resistance to flow of sealants	R
DIN EN ISO 8339 2005-09	Building construction - Sealants - Determination of tensile properties (Extension to break)	R
DIN EN ISO 8340 2005-09	Building construction - Sealants - Determination of tensile properties at maintained extension	R
DIN EN ISO 9046 2016-02	Building construction - Jointing products - Determination of adhesion/cohesion properties of sealants at constant temperature	R
DIN EN ISO 9047 2016-02	Building construction - Jointing products - Determination of adhesion/cohesion properties of sealants at variable temperatures	R
DIN EN ISO 10563 2017-09	Building construction - Sealants - Determination of change in mass and volume	R
DIN EN ISO 10590 2005-10	Building construction - Sealants - Determination of tensile properties of sealants at maintained extension after immersion in water	R
DIN EN ISO 10591 2005-10	Building construction - Sealants - Determination of adhesion/cohesion properties of sealants after immersion in water	R
DIN EN ISO 11432 2005-10	Building construction - Sealants - Determination of resistance to compression	R

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DIN EN ISO 12572 2017-05	Hygrothermal performance of building materials and products - Determination of water vapour transmission properties	R
DIN EN 302-1 2013-06	Adhesives for load-bearing timber structures - Test methods - Part 1: Determination of bond strength in longitudinal tensile shear strength	R
DIN EN 302-2 2013-06	Adhesives for load-bearing timber structures - Test methods - Part 2: Determination of resistance to delamination	R
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	R
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	R
DIN EN 302-6 2013-06	Adhesives for load-bearing timber structures - Test methods - Part 6: Determination of the conventional pressing time	R
DIN EN 302-7 2013-06	Adhesives for load-bearing timber structures - Test methods - Part 7: Determination of the conventional working life	R
DIN EN 14080 2013-09	Timber structures - Glued laminated timber and glued solid timber- Requirements	R
DIN EN 408 2012-10	Timber structures - Structural timber and glued laminated timber - Determination of some physical and mechanical properties	R
DIN EN 822 2013-05	Thermal insulating products for building applications - Determination of length and width	R
DIN EN 823 2013-05	Thermal insulating products for building applications - Determination of thickness	R
DIN EN 824 2013-05	Thermal insulating products for building applications - Determination of squareness	R

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DIN EN 825 2013-05	Thermal insulating products for building applications - Determination of flatness	R
DIN EN 826 2013-05	Thermal insulating products for building applications - Determination of compression behavior	R
DIN EN 927-3 2012-10	Paints and varnishes - Coating materials and coating systems for exterior wood - Part 3: Natural weathering test	R
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	R
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	R
DIN EN 1096-2 2012-04	Glass in building - Coated glass - Part 2: Requirements and test methods for class A, B and S coatings	R
DIN EN 1096-3 2012-04	Glass in building - Coated glass - Part 3: Requirements and test methods for class C and D coatings	R
DIN EN 1279-2 2003-06 + Berichtigung 1 2004-04	Glass in building - Insulating glass units - Part 2: Long term test method and requirements for moisture penetration; and Corr. 1	R
DIN EN 1279-3 2003-05	Glass in building - Insulating glass units - Part 3: Long term test method and requirements for gas leakage rate and for gas concentration tolerances	R
DIN EN 1279-4 2002-10	Glass in building - Insulating glass units -Part 4: Methods of test for the physical attributes of edge seals	R
DIN EN 1279-6 2002-10	Glass in building - Insulating glass units - Part 6: Factory production control and periodic tests	R

DIN EN 1602 2013-05	Thermal insulating products for building applications - Determination of the apparent density	R
DIN EN 1605 2013-05	Thermal insulating products for building applications - Determination of deformation under specified compressive load and temperature conditions	R
DIN EN 1609 2013-05	Thermal insulating products for building applications - Determination of dimensional short term water absorption by partial immersion	R
DIN EN 12087 2013-06	Thermal insulating products for building applications - Determination of long term water absorption by immersion	R
DIN EN 12088 2013-06	Thermal insulating products for building applications - Determination of long term water absorption by diffusion	R
DIN EN 12365-1 2003-12	Building hardware - Gaskets and weatherstripping for doors, windows, shutters and curtain walling - Part 1: Performance requirements and classification	R
DIN EN 12365-2 2003-12	Building hardware - Gaskets and weatherstripping for doors, windows, shutters and curtain walling - Part 2: Linear compression force test methods	R
DIN EN 12365-3 2003-12	Building hardware - Gaskets and weatherstripping for doors, windows, shutters and curtain walling - Part 3: Deflection recovery test method	R
DIN EN 12365-4 2003-12	Building hardware - Gaskets and weatherstripping for doors, windows, shutters and curtain walling - Part 4: Recovery after accelerated ageing test method	R
DIN EN 12430 2013-05	Thermal insulating products for building applications - Determination of behaviour under point load	R
DIN EN 12431 2013-05	Thermal insulating products for building applications - Determination of thickness for floating floor insulating products	R
DIN EN 12092 2002-02	Adhesives - Determination of viscosity	R

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DIN EN 13183-1 2002-07 + Berichtigung 1 2003-12	Moisture content of a piece of sawn timber - Part 1: Determination by oven dry method + Corrigendum 1	R
DIN EN 13183-2 2002-07 + Berichtigung 1 2003-12	Moisture content of a piece of sawn timber - Part 2: Estimation by electrical resistance method; + Corrigendum 1;	R
DIN EN 13183-3 2005-06	Moisture content of a piece of sawn timber - Part 3: Estimation by capacitance method	R
DIN CEN/TS 13307-2 2010-03	Laminated and finger jointed timber blanks and semi-finished profiles for non-structural uses - Part 2: Production control	R
DIN EN 302-8 2017-05	Adhesives for load-bearing timber structures - Test methods - Part 8: Static load test of multiple bond line specimens incompression shear	R
DIN EN 15416-3 2017-05	Adhesives for load bearing timber structures other than phenolic and aminoplastic - Test methods - Part 3: Creep deformation test at cyclic climate conditions with specimens loaded in bending shear	R
DIN EN 15416-4 2017-05	Adhesives for load bearing timber structures other than phenolic and aminoplastic - Test methods - Part 4: Determination of open assembly time for one component polyurethane adhesives	R
DIN EN 15416-5 2017-05	Adhesives for load bearing timber structures other than phenolic and aminoplastic - Test methods - Part 5: Determination of conventional pressing time	R
DIN 18542 2009-07	Sealing of outside wall joints with impregnated sealing tapes made of cellular plastics - Impregnated sealing tapes - Requirements and testing	R

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DIN 52452-4 2015-12	Testing of sealing compounds in building constructions - Compatibility of sealing products - Part 4: Compatibility with other protection coatings	R
DIN 52455-3 1998-08	Testing of sealants in building construction - Adhesion and extension test - Part 3: Influence of light through glass	R
DIN 68141 2016-12	Wood adhesives - Determination of properties of use of wood adhesives for load-bearing timber structures	R
CEKAL-technical regulations	CEKAL laboratory tests of IG units: - ageing behaviour (according to pvi 121vi02 and pvi 121vi04) - moisture penetration index (according to pvi 122cl41) - dew point (according to pvi 122ms31) - gas concentration (according to pvi 121vi07)	R
ift- Guideline HO-10-1 2002-11	Solid, Finger-jointed and Laminated Profiles for Wooden Windows - Requirement and Testing	R
ift- Guideline MO-764704 (RMO-RI99) 1999-02	Testing of PUR foam for mounting of door frames for internal doors from wood and wood composite materials	R
ift- Guideline OB-01/1 2015-02	Coating systems for dimensionally accurate external building components made from wood - Requirements, tests and assessment	R
ift- Guideline SA-01/1 2009-09 (Entwurf)	Repair systems for wood windows - Requirements, tests and assessment - Draft	R
ift- Guideline VE-07/02 2005-08	Insulating glazing units with movable solar shading devices integrated in the interpane separation	R
ift- Guideline VE-764410 1986-07	Testing of glazing systems with prefabricated profiles	R
RAL-GZ 632 2015-09	Cleaning of metal facades	R
SKH 00 01 dd 2009-11-10	Basis of assessment for transparent film forming coatings on timber	R

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SKH 98 04 dd 2017-08-31	Conditions and internal quality controls for the industrial application of joinery with water-based diluted paints	R
SKH 99 02 dd 2014-04	Basis of assessment for opaque primer systems for timber	R
VFF Guidance Sheet HO.03 2012-09	Requirements for coatings systems for the factory provided coating of wood and wood-metal windows, front doors and facades	?

The test ranges listed in the following table are characterised by the specified test methods.

Type of test	Test parameter	Test range	Typical test methods
Cyclic climate conditions; Temperature / humidity	Temperature Relative humidity Temperature change; Velocity	-40 °C to + 85 °C 10% to 95 % r.H. ≤ 0,57 K/min	EN 1279-3 CEKAL laboratory tests of IG units
Constant climate Temperature/ humidity	Temperature Relative humidity	-40 °C to + 85 °C 10 % to 95 % r.H.	EN 1279-3 CEKAL laboratory tests of IG units EN 60068-2-78
Temperature Dry heat Cold(ness);	Temperature	-30 °C to + 100 °C +50 °C to +950 °C	EN 12543-4 EN 14024 EN 60068-2-1 EN 60068-2-2
Radiation	Radiation intensity	50 to 1000 W/m ²	EN 12543 EN 1096
External exposure / radiation	Radiation intensity Schwarz-Standard Temperature Water temperature Radiation intensity UVA 320 nm	550 W/m ² +65 °C 45 °C 0,89 W/m ² nm	ETAG 002-1 EN ISO 11431 EN ISO 4892-2
Immersion in hot water	Temperature	+40 °C to +100 °C	ETAG 002-1 EN 204 ift - Guideline HO-10/1

Type of test	Test parameter	Test range	Typical test methods
Weighing balances	Mass	0,0001 g to 16.000 g	EN 1279-4 (TGA) EN 1279-2
Load with SO ₂ atmosphere	Temperature Concentration	RT to +40 °C 0,2 l SO ₂ to 2 litres of water	EN 1096-2 ETAG 002-1 EN ISO 3231 EN ISO 6988
Neutral salt spray atmosphere constant	Test cabinet temperature Test cabinet humidity Concentration of solution	5 K > RT to +35 °C 100 % r.H. 50 g NaCl / 1l water PH 6,5 to 7,2	EN ISO 9227
Film thickness	Eddy current	10 – 150 µm	ETAG 002-1 EN ISO 2360
Gas analysis	Gas chromatography	N ₂ , O ₂ , argon, krypton	EN 1279-3
Determination of the humidity	Karl-Fischer-Titration, annealing furnace	0,1% to 10 %	EN 1279-2

1.5.1 Special test methods in the field of environmental simulation **

DIN EN 60068-2-1 2008-01	Environmental testing - Part 2-1: Tests - Test A: Cold	R
DIN EN 60068-2-52 1996-10	Environmental testing - Part 2: Tests, Test Kb: Salt mist, cyclic (sodium chloride solution)	R R
DIN EN 60068-2-75; VDE 0468-2-75 2015-08	Environmental testing - Part 2: Tests; test Eh: Hammer tests	R
DIN EN 60068-2-78 2014-02	Environmental testing - Part 2-78 Tests - Test Cab: Damp heat, steady state	R R

1.5.2. Separate corrosion tests *

DIN EN ISO 9227 2017-07	Corrosion tests in artificial atmospheres - Salt spray tests	R
DIN EN 1670 2007-06 + Berichtigung 1 2008-07	Building hardware - Corrosion resistance - Requirements and test methods; Corrigendum 1	R

1.5.3 Separate test methods for heat, water and artificial light *

DIN EN ISO 11431 2003-01	Building construction - Jointing products - Determination of adhesion/cohesion properties of sealants after exposure to heat, water and artificial light through glass	R
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2 Safety and security of construction products and accessories

(e.g. windows, external and internal ped. doors, shutters, industrial, commercial and garage doors and gates, facades, non-load bearing external walls, glass/glazing, grilles, retrofitting products, as well as automatic/power operated construction products and their accessories)

2.1 Burglary resistance and impact resistance **

ISO 7892 1988-08	Vertical building elements; impact resistance tests - impact bodies and general test procedures	R
DIN EN 356 2000-02	Glass in building - Security glazing - Testing and classification of resistance against manual attack	R
DIN EN 596 1996-07	Timber structures - Test methods - Soft body impact test of timber framed walls	R
DIN EN 1288-1 2000-09	Glass in building - Determination of the bending strength of glass - Part 1: Fundamentals of testing glass	R
DIN EN 1288-2 2000-09	Glass in building - Determination of the bending strength of glass - Part 2: Coaxial double ring test on flat specimens with large test surface areas	R

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DIN EN 1627 2011-09	Pedestrian doorsets, windows, curtain walling, grilles and shutters Burglar resistance - Requirements and classification	R,TZ
PAS 24 2016-02	Enhanced security performance requirements for doorsets and windows in the UK	R
DIN EN 1628 2011-09 + A1 2016-03	Pedestrian doorsets, windows, curtain walling, grilles and shutters - Burglar resistance - Test method for the determination of resistance under static loading	R
DIN EN 1629 2011-09 +A1 2016-03	Pedestrian doorsets, windows, curtain walling, grilles and shutters - Burglar resistance - Test method for the determination of resistance under dynamic loading	R
DIN EN 1630 2011-09 + A1 2016-03	Pedestrian doorsets, windows, curtain walling, grilles and shutters - Burglar resistance - Test method for the determination of resistance to manual burglary attempts	R
ASTM E987-88 2009	Standard Test Methods for Deglazing Force of Fenestration Products	R,TZ
ASTM F588 2014	Standard Test Methods for Measuring the Forced Entry Resistance of Window Assemblies, Excluding Glazing Impact	R,TZ
ASTM F842 2014	Standard Test Methods for Measuring the Forced Entry Resistance of Sliding Door Assemblies, Excluding Glazing Impact	R,TZ
DIN EN 1998-1 2010-12 + A1:2013-05 + NA:2011-01	Eurocode 8: Design of structures for earthquake resistance - Part 1: General rules, seismic actions and rules for buildings; National Annex - Nationally determined parameters	R
DIN EN 12150-1 2015-12	Glass in building - Thermally toughened soda lime silicate safety glass - Part 1: Definition and description	R
DIN EN 12600 2003-04	Glass in building - Pendulum tests - Impact test method and classification for flat glass	R

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DIN EN 13024-1 2012-02	Glass in building - Thermally toughened borosilicate safety glass - Part 1: Definition and description	R
DIN EN 13049 2003-08	Windows - Soft and heavy body impact - Test method, safety requirements and classification	R
DIN EN 14019 2016-11	Curtain Walling - Impact resistance - Performance requirements	R
DIN EN 14321-1 2005-09	Glass in building - Thermally toughened alkaline earth silicate safety glass - Part 1: Definition and description	R
DIN 18104-1 2017-08	Mechanical security devices - Part 1: Additional burglar resistant products for windows and doors - requirements and test methods	R
DIN 18104-2 2013-05	Mechanical security devices - Part 2: Additional burglar resistant products for windows and doors, requirements and test methods	R
RAL-RG 607-13 1996-06	Anti-jemmy hardware - Quality control	R
Ift-Guideline Inmate cell doors 2004-02	Inmate cell doors and custody room doors - Requirements, testing, classification	R
DIN 18008-4 2013-07	Glass in Building - Design and construction rules - Part 4: Additional requirements for barrier glazing	R
DIN 18008-5 2013-07	Glass in Building - Design and construction rules - Part 5: Additional requirements for walk-on glazing	R
E DIN 18008-6 2015-02	Glass in building - Design and construction rules - Part 6: Additional requirements for walk-on glazing in case of maintenance procedures and for fall-through glazing	R
ANSI Z 97.1 2009-01	Safety Glazing Materials Used in Buildings – Safety Performance Specifications and Methods of Tests	R

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The test ranges listed in the following table are characterised by the specified test methods.

Type of test	Test parameter	Test range
Dual tyre impactor; Glass ball bag; Sand bag; Steel sphere; Axe-impact; Hammer-impact; Weights	Assessment acc. to impacts, e.g by soft / hard body impacts;	Mass: Up to 400 kg
	Mass Drop height	Displacement: 1 – 10 000 mm

2.2 Facility safety/operability security *
(e.g. of automatic power operated building products and their accessories)

DIN EN 12101-10 2006-01 + Berichtigung 1 2009-07	Smoke and heat control systems - Part 10: Power supplies; Corrigendum 1	R
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2.3 Fire safety **

A. Primary fire characteristics

- *Flammability*

DIN EN 13238 2010-06	Fire resistance and smoke control tests for door, shutter and openable window assemblies and elements of building hardware - Part 2: Fire resistance characterisation test for elements of building hardware	TZ
DIN 4102-1 1998-05	Fire behaviour of building materials and building components - Part 1: Building materials; concepts, requirements and tests	TZ
DIN EN ISO 1182 2020-11	Reaction to fire tests for products - Non-combustibility test	TZ

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- *Ignitability*

DIN EN ISO 11925-2 2020-07	Reaction to fire tests - Ignitability of products subjected to direct impingement of flame - Part 2: Single-flame source test	TZ
DIN 4102-7 2018-11	Fire behaviour of building materials and building components - Part 7: Roofing; definitions, requirements and testing tests	TZ
DIN 4102-15 1990-05	Fire behaviour of building materials and elements - Part 15: "Brandschacht" (fire shaft)	TZ
DIN 4102-16 2015-09	Fire behaviour of building materials and elements - Part 16: "Brandschacht" tests (fire shaft tests)	TZ
DIN 50050-1 1986-04	Testing of materials; burning behaviour of materials; small burning cabinet	TZ
DIN 50051 1977-02	Testing of Materials; Burning Behaviour of Materials; Burner	TZ
ABM-Kolloquium (Niederschrift) 28, Anlage 1: 1983-02	Testing of rigid foam with and without final coating (Minutes 28, Annex 1	TZ
Prüfgrundsätze 1993-11	Testing principles for non-combustible building R materials (Building materials class A1 according to DIN 4102-1)	TZ
DIN 18089-1 1984-01	Fire barriers - fillers for fire-doors - mineral fibre boards (felts) - definition, designation, requirements, tests	TZ

- *Flame spread*

DIN EN 16733 2016-07	Reaction to fire tests for building products - Determination of a building product's propensity to undergo continuous smouldering	TZ
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- *Heat release*

DIN EN ISO 1716 2010-11	Reaction to fire tests for products - Determination of the gross heat of combustion (calorific value)	TZ
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- *Melting behaviour, flaming droplets/particles*

DIN 4102-17 2017-12	Fire behaviour of building materials and elements - Part 17: Determination of melting point of mineral fibre insulating materials - concepts, requirements and testing;	TZ
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B Fire side effects

- *Optical density of smoke*

DIN EN 1634-3 2005-01 Berichtigung 1 2009-09	Fire resistance and smoke control tests for door and shutter assemblies, openable windows and elements of building hardware - Part 3: Smoke control test for door and shutter assemblies; Corrigendum 1;	TZ
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DIN 18095-2 1991-03	Smoke control doors - Part 2: Type testing for durability and leakage	TZ
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DIN 18095-3 1999-06	Smoke control shutters - Part 3: Application of test results	TZ
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UL 1784 2015-02	UL Standard for Air Leakage Tests of Door Assemblies and Other Opening Protectives	TZ
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DIN EN 12101-1 2006-06	Smoke and heat control systems - Part 1: Specification for smoke barriers	TZ
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DIN EN 12101-2 2003-09 + Rev. 2017-08	Smoke and heat control systems - Part 2: Natural smoke and heat exhaust ventilators	TZ
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C. Component behaviour

- *Resistance to fire*

ISO 3008-1 2019-01	Fire resistance tests - Door and shutter assemblies - Part 1: General requirements	TZ
ISO 3009 2003-11	Fire-resistance tests - Elements of building construction - Glazed elements	TZ
DIN EN 1363-1 2020-05	Fire resistance tests - Part 1: General requirements;	TZ
DIN EN 1363-2 1999-10	Fire resistance tests - Part 2: Alternative and additional procedures	TZ
DIN V ENV 1363-3: 1999-09	Fire resistance tests - Part 3: Verification of furnace performance	TZ
DIN EN 1364-1 2015-09	Fire resistance tests for non-loadbearing elements - Part 1: Walls	TZ
DIN EN 1364-2 2018-03	Fire resistance tests for non-loadbearing elements - Part 2: Ceilings	TZ
DIN EN 1364-3 2014-05	Fire resistance tests for non-loadbearing elements - Part 3: Curtain walling - Full configuration	TZ
DIN EN 1364-4 2014-05	Fire resistance tests for non-loadbearing elements - Part 4: Curtain walling - Part configuration	TZ
DIN EN 1364-5 2017-09	Fire resistance tests for non-loadbearing elements - Part 5: Air transfer grilles	TZ

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DIN EN 1365-1 2013-08	Fire resistance tests for loadbearing elements - Part 1: Walls	TZ
DIN EN 1365-2 2015-02	Fire resistance tests for loadbearing elements - Part 2: Floors and roofs (<i>refers to EN 1363-1</i>)	TZ
DIN EN 1365-3 2000-02	Fire resistance tests for loadbearing elements - Part 3: Beams	TZ
DIN EN 1365-4 1999-10	Fire resistance tests for loadbearing elements – Part 4:	TZ
DIN EN 1366-3 2009-07	Fire resistance tests for service installations - Part 3: Penetration seals	TZ
DIN EN 1366-4 2010-08	Fire resistance tests for service installations - Part 4: Linear joint seals; German version EN 1366- 4:2006+A1:2010	TZ
DIN EN 1366-7 2004-09	Fire resistance tests for service installations - Part 7: Conveyor systems and their closures	TZ
DIN EN 1634-1 2018-04	Fire resistance and smoke control tests for door and shutter assemblies, openable windows and elements of building hardware - Part 1: Fire resistance test for door and shutter assemblies and openable windows	TZ
DIN EN 1634-2 2009-05	Fire resistance and smoke control tests for door, shutter and openable window assemblies and elements of building hardware - Part 2: Fire resistance characterisation test for elements of building hardware	TZ

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BS 476 1987	Fire tests on building materials and structures	TZ
BS 476-20 1987	Fire tests on building materials and structures – Part 20: Method for determination of the fire resistance of elements of construction (general principles)	TZ
BS 476-22 1987	Fire tests on building materials and structures – Part 22: Methods for determination of the fire resistance of non-loadbearing elements of construction	TZ
DIBt Prüfgrundlagen (Testing principles) 2013-06	Fire doors and shutters in the modified approval procedure; Test agreements between the DIBt and the approval testing bodies designated in the procedure	TZ
DIBt Prüfgrundlagen (Testing principles) 2014-10	Test agreements for the installation of fire doors and shutters in fire-resistant containers	TZ
DIBt Prüfgrundlagen (Testing principles) 2014-10	Test agreements for fire-resistant doors of inspection openings	TZ
DIBt Prüfgrundlagen (Testing principles) 2014-07	General requirements and test specifications for the approval procedure for hold-open systems	TZ
DIN EN 14470-1 2004-07	Fire safety storage cabinets - Part 1: Safety storage cabinets for flammable liquids	TZ
DIN EN 14470-2 2006-11	Fire safety storage cabinets - Part 2: Safety cabinets for pressurised gas cylinders	TZ
DIN 4102-2 1977-09	Fire Behavior of Building Materials and Building Components - Part 2: Building Components - Definitions, Requirements and tests	TZ

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DIN 4102-5 1977-09	Fire Behavior of Building Materials and Building Components - Part 5: Fire Barriers, Barriers in Lift Wells and Glazings Resistant against Fire - Definitions, Requirements and tests	TZ
DIN 4102-8 2003-10	Fire behavior of building materials and components - Part 8: Small scale test furnace	TZ
DIN 4102-9 1990-05	Fire behavior of building materials and elements; seals for cable penetrations; concepts, requirements and testing	TZ
DIN 4102-11 1985-12	Fire behavior of building materials and building components - Part 11: Pipe encasements, pipe bushings, service shafts and ducts, and barriers across inspection openings; terminology, requirements and testing	TZ
DIN 4102-13 1990-05	Fire behavior of building materials and elements - Part 13: Fire resistant glazing; concepts, requirements and testing	TZ
DIN 18093 2017-10	Fire barriers - installation of fire doors in fireproof masonry or concrete walls - position and shapes of anchorages, installation	TZ
UL 9 2009-07	UL Standard for Safety for Fire Tests of Window Assemblies	TZ
UL 10B 2008-02 (Rev2009)	UL Standard for Safety for Fire Tests of Door Assemblies	TZ
UL 10C 2016-06	UL Standard for Safety for Positive Pressure Fire Tests of Door Assemblies	TZ
UL 10D 2017-09	UL Standard for Fire Tests of Fire Protective Curtain Assemblies	TZ
UL 263 2011-06	UL Standard for Safety for Fire Tests of Building Construction and Materials	TZ

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UL 1479 2015-06	UL Standard for Fire Tests of Penetration Firestops	TZ
ASTM E 119 16a	American National Standard Test Methods for Fire Tests of Building Construction and Materials	TZ
ASTM E 2226 15b	Standard Practice for Application of Hose Stream	TZ
ASTM E 814 11a	American National Standard Test Method for Fire Tests of Penetration Firestop Systems	TZ
UL 2079 2015-08	UL Standard for Tests for Fire Resistance of Building Joint Systems	TZ
DIBt-Regel (DIBt Rule) 2013-12	Approval principles for construction products which are used as insulating building materials in building components and types of construction	TZ
DIBt Prüfgrundlagen (Testing principles) October 2014	Testing and assessment principles SVA B3„Reaction to fire of construction products – Fire- resistant glazing“ of DIt, Berlin	TZ

D Component behaviour

- Seat tests

DIN EN 1021-1 2014-10	Furniture - Assessment of the ignitability of upholstered furniture - Part 1: Ignition source smouldering cigarette	TZ
DIN EN 1021-2 2014-10	Furniture - Assessment of the ignitability of upholstered furniture - Part 2: Ignition source match flame equivalent	TZ

In connection with:

DIN EN 13501-1 2010-01	Fire classification of construction products and building elements - Part 1: Classification using data from reaction to fire tests	R, TZ
DIN EN 13501-2 2016-12	Fire classification of construction products and building elements - Part 2: Classification using data from fire resistance tests, excluding ventilation services	R, TZ
DIN EN 13501-4 2016-12	Fire classification of construction products and building elements - Part 4: Classification using data from fire resistance tests on components of smoke control systems	R, TZ
DIN EN 13501-5 2016-12	Fire classification of construction products and building elements - Part 5: Classification using data from external fire exposure to roofs tests	R, TZ
DIN EN 45545-1 2013-08	Railway applications - Fire protection on railway vehicles – Part 1: General	R
DIN EN 45545-2 2013-08	Railway applications - Fire protection on railway vehicles – Part 2: Requirements for fire behaviour of materials and components	TZ
DIN EN 45545-3 2013-08	Railway applications - Fire protection on railway vehicles – Part 3: Fire resistance requirements for fire barriers	R

3 Building physics tests

3.1 Acoustic tests of construction products, building elements and buildings ***

DIN EN ISO 10140-1 2016-12	Acoustics - Laboratory measurement of sound insulation of building elements - Part 1: Application rules for specific products	S, R
DIN EN ISO 10140-2 2010-12	Acoustics - Laboratory measurement of sound insulation of building elements - Part 2: Measurement of airborne sound insulation	S, R
DIN EN ISO 10140-3 2015-11	Acoustics - Laboratory measurement of sound insulation of S building elements - Part 3: Measurement of impact sound insulation	S
DIN EN ISO 10140-4 2010-12	Acoustics - Laboratory measurement of sound insulation of building elements - Part 4: Measurement procedures and requirements	S, R
DIN EN ISO 10140-5 2014-09	Acoustics - Laboratory measurement of sound insulation of building elements - Part 5: Requirements for test facilities and equipment	S, R
DIN EN ISO 16283-1 2018-04	Acoustics - Field measurement of sound insulation in buildings and S of building elements - Part 1: Airborne sound insulation	S
DIN EN ISO 16283-2 2018-11	Acoustics - Field measurement of sound insulation in buildings and S of building elements - Part 2: Impact sound insulation	S
DIN EN ISO 16283-3 2016-09	Acoustics - Field measurement of sound insulation in buildings and of building elements - Part 3: Façade sound insulation	
DIN EN ISO 3382-2 2008-09 + Berichtigung 1 2009-09	Acoustics - Measurement of room acoustic parameters - Part 2: Reverberation time in ordinary rooms; + Corrigendum 1	S, R
DIN EN ISO 10052 2010-10	Acoustics - Field measurements of airborne and impact sound insulation and of equipment sound - Survey method	S, R

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DIN EN ISO 10848-1 2018-02	Acoustics - Laboratory measurement of the flanking transmission of airborne and impact sound between adjoining rooms - Part 1 Frame document (here: The flanking sound insulation will not be tested on suspended ceilings and access floors.)	S
DIN EN ISO 10848-2 (2006-08 + Berichtigung 1) 2018-02	Acoustics - Laboratory measurement of the flanking transmission of airborne and impact sound between adjoining rooms - Part 2: Application to light elements when the junction has a small influence; Corrigendum 1 (here: <i>The flanking sound insulation will not be tested on suspended ceilings and access floors.</i>)	S
DIN EN ISO 10848-3 2018-02	Acoustics - Laboratory measurement of the flanking transmission of airborne and impact sound between adjoining rooms - Part 3: Application to light elements when the junction has a substantial influence	S
DIN EN 29052-1 1992-08	Acoustics - determination of dynamic stiffness - Part 1: materials used under floating floors in dwellings	S
DIN EN ISO 29053 2019-03	Acoustics - materials for acoustical applications - determination of airflow resistance	S
DIN 4109-4 2016-07	Sound insulation in buildings - Part 4: Testing of acoustics in buildings	S, R
Ift - Guideline LU-01/1 2007-06	Ventilation systems for windows - Part 1: Performance characteristics	S, R
DIN EN 16205 2013-09	Laboratory measurement of walking noise on floors	S
DIN EN ISO 717-1 2013-06	Acoustics - Rating of sound insulation in buildings and of building elements - Part 1: Airborne sound insulation	S, R
DIN EN ISO 717-2 2013-06	Acoustics - Rating of sound insulation in buildings and of building elements - Part 2: Impact sound insulation	S

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DIN EN 12758 2019-12	Glass in building - Glazing and airborne sound insulation - Product descriptions and determination of properties	S, R
DIN EN ISO 18233 2006-08	Acoustics - Application of new measurement methods in building and room acoustics	S, R
DIN EN ISO 12999-1 2014-09	Acoustics - Determination and application of measurement uncertainties in building acoustics - Part 1: Sound insulation	S, R

The test ranges listed in the following table are characterised by the specified test methods.

Type of test	Test parameter	Test range	
Acoustic test facilities, Multi-channel measuring system, Sound sources, Microphones etc.	<ul style="list-style-type: none"> - Normalized flanking level difference $D_{n,f}$ (e.g. DIN EN ISO 10848-1) - Weighted normalized flanking level difference $D_{n,f,w}$ (e.g. DIN EN ISO 10848-1; DIN EN ISO 717-1) - Vibration reduction index $K_{i,j}$ (z.B. DIN EN ISO 10848-1) 	$D_{n,f}$ (dB) [0..100] $D_{n,f,w}$ (dB) [0..75] $D_{n,f,w}+C$ (dB) [0..75] $D_{n,f,w}+C_{tr}$ (dB) [0..75] K_{ij} (dB) [0..60]	
Acoustic test facilities, Multi-channel measuring system, Sound sources, Microphones etc .	<ul style="list-style-type: none"> - Sound pressure level (e.g. acc.to DIN 4109-4) - Normalized sound pressure level (e.g. acc. to ift - Guideline LU-01/1) 	L_{in} (dB(A)) [0..70] L_N (dB(A)) [0..70]	
Acoustic test facilities incl. multi-channel measuring system , Sound sources, Shaker, Vibration transducer etc.	<ul style="list-style-type: none"> - Reverberation time T (e.g. acc. to DIN EN ISO 3382-2) - Structure-borne reverberation time (e.g. acc. to DIN EN ISO 10848-1) 	T (s) [0,1..10] T_s (s) [0,005..1]	
Multi-channel measuring system, Sound sources, , Shaker, Vibration transducer etc. Pressure gauge & flow meter	<ul style="list-style-type: none"> - Air flow resistance r (e.g. acc. to DIN EN 29053) - Dynamic stiffness s' (e.g. acc. to DIN EN 29052-1) 	r (kPa·s/m ²) [3..50000] s' (MN/m ³) [0..100]	

	Type of test	Test parameter	Test range	
	Acoustic test facilities, Multi-channel measuring system (acc. to DIN EN ISO 10140), Sound sources, Microphones etc.	- Sound reduction index R (e.g. DIN EN ISO 10140-2)	R(dB) [0..110]	
		- Weighted sound reduction index R_w (e.g. DIN EN ISO 10140-2; DIN EN ISO 717-1)	R_w (dB) [0..90] R_w+C (dB) [0..90] R_w+C_{tr} (dB) [0..90]	
		-Sound transmission class STC (e.g. ASTM E413-10)	STC(dB) [0..90]	
		- Intensity sound reduction index R_i (e.g. DIN EN ISO 15186-1)	R_i (dB) [0..110]	
		- Weighted intensity sound reduction index $R_{i,w}$ (e.g. DIN EN ISO 15186-1; DIN EN ISO 717-1)	$R_{i,w}$ (dB) [0..90] $R_{i,w}+C$ (dB) [0..90] $R_{i,w}+C_{tr}$ (dB) [0..90]	
		- Apparent sound reduction index R' and/or R'_{45° (e.g. DIN EN ISO 16283-1; DIN EN ISO 16283-3)	R' , R'_{45} (dB) [0..110]	
		- Weighted apparent sound reduction index R'_w and/or $R'_{45^\circ,w}$ (e.g. DIN EN ISO 16283-1; DIN EN ISO 16283-3; DIN EN ISO 717-1)	R'_w (dB) [0..90] R'_w+C (dB) [0..90] R'_w+C_{tr} (dB) [0..90]	
	Acoustic test facilities, Multi-channel measuring system (acc. to DIN EN ISO 10140), Sound sources, Microphones etc .	- Standardized level difference D_{nT} (e.g. DIN EN ISO 16283-1)	D_{nT} (dB) [0..110]	
		- Weighted standardized level difference $D_{nT,w}$ (e.g. DIN EN ISO 16283-1; DIN EN ISO 717-1)	$D_{nT,w}$ (dB) [0..90] $D_{nT,w}+C$ (dB) [0..90] $D_{nT,w}+C_{tr}$ (dB) [0..90]	
		- Joint sound reduction index R_s (e.g. DIN EN ISO 10140-1)	R_s (dB) [0..80]	
		- Weighted joint sound reduction index $R_{s,w}$ (e.g. DIN EN ISO 10140-1, DIN EN ISO 717-1)	$R_{s,w}$ (dB) [0..70] $R_{s,w}+C$ (dB) [0..70] $R_{s,w}+C_{tr}$ (dB) [0..70]	
		- Normalized level difference $D_{n,e}$ (e.g. DIN EN ISO 10140-2)	$D_{n,e}$ (dB) [0..100]	
		- Weighted normalized level difference $D_{n,e,w}$ (e.g. DIN EN ISO 10140-2; DIN EN ISO 717-1)	$D_{n,e,w}$ (dB) [0..100] $D_{n,e,w}+C$ (dB) [0..100] $D_{n,e,w}+C_{tr}$ (dB)[0..100]	
		- Improved sound reduction index ΔR (e.g. DIN EN ISO 10140-1)	ΔR (dB) [0..100]	
		- Improved weighted sound reduction index ΔR_w (e.g. DIN EN ISO 10140-1; DIN EN ISO 717-1)	ΔR_w (dB) [0..60] $\Delta(R_w+C)$ (dB) [0..60] $\Delta(R_w+C_{tr})$ [0..60]	1,8 dB 1,9 dB 2,0 dB

	Type of test	Test parameter	Test range	
	Acoustic test facilities, Multi-channel measuring system (acc. to DIN EN ISO 10140), Sound sources, Microphones etc.	- Normalized impact sound pressure level L_n (e.g. DIN EN ISO 10140-3)	$L_n(\text{dB}) [0..100]$	
		- Weighted normalized impact sound pressure level $L_{n,w}$ (e.g. DIN EN ISO 10140-3; DIN EN ISO 717-2)	$L_{n,w}(\text{dB}) [0..100]$ $L_{n,w}+C_i(\text{dB}) [0..100]$	
		- Reduction of impact sound pressure level ΔL (e.g. DIN EN ISO 10140-1)	$\Delta L(\text{dB}) [0..70]$	
		- Weighted reduction of impact sound pressure level $\Delta L_w, \Delta L_{t,w}$ (e.g. DIN EN ISO 10140-1; DIN EN ISO 717-2)	$\Delta L_w(\text{dB}) [0..50]$ $\Delta L_w+C_{i,\Delta}(\text{dB}) [0..50]$ $\Delta L_{t,w}(\text{dB}) [0..50]$ $\Delta L_{t,w}+C_{i,\Delta,t}(\text{dB}) [0..50]$	
		- Field normalized impact sound pressure level L'_n (e.g. DIN EN ISO 16283-2)	$L'_n(\text{dB}) [0..100]$	
		- Field weighted normalized impact sound pressure level $L'_{n,w}$ (e.g. DIN EN ISO 16283-2; DIN EN ISO 717-2)	$L'_{n,w}(\text{dB}) [0..100]$ $L'_{n,w}+C_i(\text{dB}) [0..100]$	
		- Standardized impact sound pressure level L'_{nT} (e.g. DIN EN ISO 16283-2)	$L'_{nT}(\text{dB}) [0..100]$	
		- Weighted standardized impact sound pressure level $L'_{nT,w}$ (e.g. DIN EN ISO 16283-2; DIN EN ISO 717-2)	$L'_{nT,w}(\text{dB}) [0..100]$ $L'_{nT,w}+C_i(\text{dB}) [0..100]$	
		- Normalized impact sound pressure level $L_{n,f}$ (e.g. DIN EN ISO 10848-1)	$L_{n,f}(\text{dB}) [0..100]$	
		- Weighted normalized impact sound pressure level $L_{n,f,w}$ (e.g. DIN EN ISO 10848-1; DIN EN ISO 717-2)	$L_{n,f,w}(\text{dB}) [0..100]$ $L_{n,f,w}+C_i(\text{dB}) [0..100]$	

3.2 Thermal insulation, climate technology, light and radiation technology of construction products, building components and accessories ***

3.2.1 Thermal insulation, climate technology

DIN EN ISO 6946 2018-04	Building components and building elements - Thermal resistance and thermal transmittance - Calculation method	R
DIN EN ISO 10077-1 2018-01	Thermal performance of windows, doors and shutters Calculation of thermal transmittance - Part 1: General	R

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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	R
DIN EN ISO 10211 2018-03	Thermal bridges in building construction - Heat flows and surface temperatures - Detailed calculations	R
DIN EN ISO 13788 2013-05	Hygrothermal performance of building components and building elements – Internal surface temperature to avoid critical surface humidity and interstitial condensation – Calculation methods	R
DIN EN ISO 13370 2018-03	Thermal performance of buildings - Heat transfer via the ground - Calculation methods	R
DIN EN ISO 14683 2018-03	Thermal bridges in building construction - Linear thermal transmittance - Simplified methods and default values	R
DIN EN 673 2011-04	Glass in building - Determination of thermal transmittance (U value) - Calculation method	R
DIN EN 674 2011-09	Glass in building - Determination of thermal transmittance (U value) - Guarded hot plate method	R
DIN EN 675 2011-09	Glass in building - Determination of thermal transmittance (U value) - Heat flow meter method	R
DIN EN 1121 2000-09	Doors - Behaviour between two different climates - Test method	R
DIN EN 1294 2000-07	Door leaves - Determination of the behaviour under humidity variations in successive uniform climates	R
DIN EN 16580 2015-10	Windows and doors - Wetness and splash water proof door leaves - Test and classification	R
DIN EN 1934 1998-04	Thermal performance of buildings - Determination of thermal resistance by hot box method using heat flow meter - Masonry	R

DIN EN 12412-2 2003-11	Thermal performance of windows, doors and shutters - Determination of thermal transmittance by hot box method - Part 2: Frames	R
DIN EN 12412-4 2003-11	Thermal performance of windows, doors and shutters Determination of thermal transmittance by hot box method - Part 4: Roller shutter boxes	R
DIN EN 12428 2013-04	Industrial, commercial and garage doors- Thermal transmittance - Requirements for the classification	R
prEN 12494 1996-11	Building components and building elements - In-situ measurement of the surface-to-surface thermal resistance (withdrawn draft standard)	R
DIN EN ISO 12567-1 2010-12	Thermal performance of windows and doors - Determination of R thermal transmittance by the hot-box method - Part 1: Complete windows and doors	R
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	R
DIN EN 13241 2016-12	Industrial, commercial, garage doors and gates - Product standard, performance characteristics - Annex B	R
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	R
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	R

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 - Thick products of high and medium thermal resistance	R
DIN EN 13125 2001-10	Shutters and blinds - Additional thermal resistance - Allocation of a class of air permeability to a product	R
DIN EN 13420 2011-07	Windows - Behaviour between different climates - Test method	R
DIN EN 13947 2007-07	Thermal performance of curtain walling - Calculation of thermal transmittance	R
DIN EN ISO 12631 2013-01	Thermal performance of curtain walling - Calculation of thermal transmittance	R
DIN 4108-2 2013-02	Thermal protection and energy economy in buildings - Part 2: Minimum requirements for thermal insulation	R
DIN 4108-3 2014-11	Thermal protection and energy economy in buildings - Part 3: Protection against moisture subject to climate conditions - Requirements and directions for design and construction	R
DIN 4108-4 2017-03	Thermal insulation and energy economy in buildings – Part 4: Hygrothermal design values	R
DIN V 4108-6 2003-06 + Berichtigung 1 2004-03	Thermal protection and energy economy in buildings - Part 6: Calculation of annual heat and energy use; Corrigendum 1	R
DIN 4108-7 2011-01	Thermal insulation and energy economy in buildings - Part 7: Air tightness of buildings - Requirements, recommendations and examples for planning and performance	R
DIN 4108-10 2015-12	Thermal insulation and energy economy in buildings - Part 10: Application-related requirements for thermal insulation materials - Factory made products	R

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DIN 4108 Supplement 2 2006-03	Thermal insulation and energy economy in buildings thermal bridges - Examples for planning and performance	R
DIN-Technical Report 4108-8 2010-09	Thermal insulation and energy economy in buildings - Part 8: Avoidance of mould growth in residential buildings	R
DIN EN 15976 2011-07	Flexible sheets for waterproofing - Determination of emissivity	R
DIN EN 16012 2015-05	Thermal insulation for buildings - Reflective insulation products - Determination of the declared thermal performance	R
DIN EN 1873 2014-08 DIN EN 1873 2016-07	Prefabricated accessories for roofing - Individual roof lights of plastics - Product specification and test methods - Annex D	R
DIN EN 14315-1 2013-04	Thermal insulating products for buildings - In-situ formed sprayed rigid polyurethane (PUR) and polyisocyanurate (PIR) foam products - Part 1: Specification for the rigid foam spray system before installation	R
DIN EN 14315-2 2013-04	Thermal insulating products for buildings - In-situ formed sprayed rigid polyurethane (PUR) and polyisocyanurate (PIR) foam products - Part 2: Specification for the installed insulation products	R
ISO 8301 1991-08 +A1:2010-08	Thermal insulation - Determination of steady-state thermal resistance and related properties - Heat flow meter apparatus; Amendment 1	R
ISO 8302 1991-08	Thermal insulation - Determination of steady-state thermal resistance and related properties - Guarded hot plate apparatus	R
DIN EN ISO 8990 1996-09	Thermal insulation - Determination of steady-state thermal transmission properties - Calibrated and guarded hot box	R

ift-AA 1911-WÄR09 2011-08	Measuring the calorimetric g-value	R
ift-AA 1913-WÄR11 2011-08	ift-in-house method for condensation water - Determination of the condensation behaviour	R
ift-Guideline VE-07/2 2005-08	Insulating glazing units with movable solar shading devices integrated in the interpane separation - Procedure to test the fitness for use of insulating glazing units (IGU) with integrated movable devices	R
ift-Guideline VE-08/4 2017-03	Basis for the evaluation of direct glazing systems Part 1 Characterisation of direct glazing systems Part 2 Tests of window systems (building components) Part 3 Compatibility Part 4 Quality assurance Part 5 Supplement to Part 1: Direct glazing to laminated wood	R
ift-Guideline FE-13/1 2011-04	Suitability of PVC profiles for windows Testing and classification	R
ISO 9869-1 2014-08	Thermal insulation - Building elements - In-situ measurement of thermal resistance and thermal transmittance - Part 1: Heat flow meter method	R
DIN 18159-2 1978-06	Cellular Plastics as in-situ Foam in Building; In-situ Foam Produced from Urea-formaldehyde (UF) Resin for Thermal Insulation; Application, Properties, Execution, Testing	R
DIN EN ISO 10456 2010-05	Building materials and products - Hygrothermal properties - Tabulated design values and procedures for determining declared and design thermal values	R
ift-Guideline WA-01/2 2005-02	Uf-values for thermal break metal profiles of window systems - Guideline to determine the Uf-values of thermal break metal profile sections of window systems	R
ift-Guideline WA-02/4 2015-10	Uf-values for PVC profile sections of window systems	R

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ift-Guideline WA-03/3 2005-02	Uf-values for thermal break metal profiles of facade systems - Guideline to determine the Uf-values of thermal break metal profile sections of facade systems	R
ift-Guideline WA-05/2 2012-08	Evaluation of calculation programmes - Method for plausibility check of programmes to calculate the UW-values of windows, the UD-values of pedestrian doors and industrial, commercial doors and the UCW-values of curtain walls	R
ift-Guideline WA-08/3 2015-02	Thermally improved spacers - Part 1: Determination of representative values for profile sections of windows	R
ift-Guideline WA-13/1 2010-09	Psi-values of curtain walling - Determination of linear thermal transmittance (Psi-values) of curtain walling in combination with various infill panels (IGU units, panels and mounting frames)	R
ift-Guideline WA-15/2 2011-02	Suitability of windows, external pedestrian doors and curtain walling for passive houses - Procedure and criteria for assessing the suitability of construction products for windows, external pedestrian doors and curtain walling for passive houses on the basis for European standards	R
ift-Guideline WA-17/1 2013-02	Thermally improved spacers - Part 2: Determination of the equivalent thermal conductivity by means of measurement	R
ift-Guideline WA-22/2 2016-08	Thermally improved spacers - Part 3: Determining the representative Psi-values of facade profiles	R

The test ranges listed in the following table are characterised by the specified test methods.

Type of test	Test parameter	Test range	Typical test method
Transmission of heat	Thermal transmittance U	U [0,1..10] W / m ² K	EN 12412-2 EN 12412-4
	Thermal resistance R	R [5..0,01] m ² K / W ΔR [5..0,01] m ² K / W	EN ISO 12567-1 EN ISO 12567-2
	Linear thermal bridge Ψ	Ψ [0..1] W / mK	EN 673, EN 674 EN 675
	Point thermal bridge X	χ [0..1] W / K	EN 1934 ISO 9869 prEN 12494 EN 16012 EN 13241 EN 12664 EN 12667 EN 12939 EN ISO 10077-1 EN ISO 10077-2 EN ISO 6946 EN 12631 EN 13947 EN 673 EN 12428 EN 1873 EN 13125
Temperatures	Surface temperature, Temperature factors, Isothermal characteristics	ϑ [-50..+100] °C f [0..1]	EN ISO 10211 EN ISO 13788
Constant and alternating climate	Temperature Relative air humidity Visual observation	θ [-30 ... +90] °C [5 ... 95] %	EN 1121 EN 1294 EN 16580 EN 13420 ift-in-house-method « Condensation » EN 1125 EN 179
Luminous and solar characteristics	Total solar energy transmittance Fc-value	g [0..1] Fc [0..1]	ift-in-house-method « Calorimetric measurement »

3.2.2 Light and radiation technology

DIN EN 410 2011-04	Glass in building - Determination of luminous and solar characteristics of glazing	R
DIN EN 12898 2001-04	Glass in building - Determination of the emissivity	R
DIN EN 13363-1 2007-09 + Berichtigung 1 2009-09	Solar protection devices combined with glazing - Calculations of solar and light transmittance - Part 1: Simplified method; Corrigendum to DIN EN 13363-1:2007-09	R
DIN EN 13363-2 2005-06 + Berichtigung 1 2007-04	Solar protection devices combined with glazing - Calculation of total solar energy transmittance and light transmittance - Part 2: Detailed calculation method; + Corrigendum 1 (EN 13363-2:2005/AC:2006)	R
DIN EN ISO 13468-1 1997-01	Plastics - Determination of the total luminous transmittance of transparent materials - Part 1: Single-beam instrument	R
DIN EN ISO 13468-2 2006-07	Plastics - Determination of the total luminous transmittance of transparent materials - Part 2: Double-beam instrument	R
DIN EN 14500 2008-08	Blinds and shutters - Thermal and visual comfort - Test and calculation methods	R
DIN EN 15976 2011-07	Flexible sheets for waterproofing - Determination of emissivity	R
DIN 5036-3 1979-11	Radiometric and photometric properties of materials; methods of measurement for photometric and spectral radiometric characteristics	R
DIN 5036-4 1977-08	Radiometric and photometric properties of materials; classification	R

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DIN EN ISO 52022-1 2018-01	Energy performance of buildings - Thermal, solar and daylight properties of building components and elements - Part 1: Simplified calculation method of the solar and daylight characteristics for solar protection devices combined with glazing (ISO 52022-1:2017)	R
DIN CEN ISO/TR 52022-2 2017	Energy performance of buildings - Thermal, solar and daylight properties of building components and elements - Part 2: Explanation and justification (ISO/TR 52022-2:2017)	R
DIN EN ISO 52022-3 2018-01	Energy performance of buildings - Thermal, solar and daylight properties of building components and elements - Part 3: Detailed calculation method of the solar and daylight characteristics for solar protection devices combined with glazing (ISO 52022-3:2017).	
CIE 38 1977	Radiometric and photometric characteristics of materials and their measurement	R
CIE 130 1998	Practical methods for the measurement of reflectance and transmittance	R

The test ranges listed in the following table are characterised by the specified test methods.

	Type of test	Test parameter	Test range
	UV VIS NIR Spectrophotometer	Spectral transmittance $\tau(\lambda)$ Spectral reflectance $\rho(\lambda)$	280 to 2500 nm 280 to 2500 nm
	Photometer with integrating sphere ($\varnothing = 1,25$ m)	Integral light transmittance τ_v Integral light reflectance ρ_v	τ_v standard illuminant D65 and A ρ_v standard illuminant D65 and A
	Diode array spectrometer with integrating sphere ($\varnothing = 1,25$ m)	Spectral transmittance $\tau(\lambda)$ Spectral reflectance $\rho(\lambda)$	310 to 1690 nm 310 to 1690 nm

	Type of test	Test parameter	Test range
	FT IR Spectrometer	Directional spectral transmittance $\tau(\lambda)$ Directional spectral reflectance $\rho(\lambda)$	5 μm to 50 μm 5 μm to 50 μm
	Integral emissivity meter (TIR)	Integral emissivity ε (Maximum at 8 μm)	8 μm
	Calculation-software	Radiation and luminous characteristics such as Ultraviolet transmittance τ_{UV} Light transmittance τ_v Radiation transmittance τ_e Radiation reflectance ρ_e Light reflectance ρ_v Standard emissivity ε_n Secondary heat transfer factor q_i Total solar energy transmittance g Colour rendering index R_a	Calculation of measured results $\tau(\lambda)$ and $\rho(\lambda)$

4. Testing of construction products (System 3 for the assessment and verification of constancy of performance) in accordance with the Regulation (EU) No. 305/2011 to defined harmonised conditions for the marketing of construction products (Construction Products Regulation - CPR)

Decisions / resolutions of the Commission	System ¹⁾	Technical Specification
1996/580/EC 2001/596/EC Curtain wallings	3	EN 13830:2003 Curtain walling – Product standard
1997/462/EC 2001/596/EC Wood-based panels	3	EN 13986:2004 + A1:2015 Wood-based panels for use in construction - Characteristics, evaluation of conformity and marking
1998/213/EC Internal partition kits	3	ETAG 003:2012-04 Guideline for European technical approval for internal partition kits for use as non-loadbearing walls
1998/436/EC 2001/596/ EC Roof coverings, rooflights, roof windows and ancillary products	3	EN 1873:2005 Prefabricated accessories for roofing - Individual roof lights of plastics - Product specification and test methods
		EN 14963:2006 Roof coverings - Continuous rooflights of plastics with or without upstands - Classification, requirements and test methods
1998/437/EC 2001/596/EC (L 209) Internal and external wall and ceiling finishes	3	EN 15102:2007+A1:2011 Decorative wallcoverings - Roll and panel form
1998/600/EC Self-supporting translucent roof kits (except glass-based kits)	3	ETAG 010:2002 Guideline for European technical approval of self-supporting translucent roof kits
1999/90/EC Membranes (2/3): - Damp proofing sheets	3	EN 13984:2013 Flexible sheets for waterproofing - Plastic and rubber vapour control layers - Definitions and characteristics

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1999/91/EC Thermal insulation products	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 - Specification
		EN 13164:2012 + A1:2015 Thermal insulation products for buildings - Factory made extruded polystyrene foam (XPS) products - Specification
		EN 13165:2012 + A2:2016 Thermal insulation products for buildings - Factory made rigid polyurethane foam (PU) products - Specification
		EN 13166:2012 + A2:2016 Thermal insulation products for buildings - Factory made phenolic foam (PF) products - Specification;
		EN 13167:2012 + A1:2015 Thermal insulation products for buildings - Factory made cellular glass (CG) products - Specification
		EN 13168:2012 + A1:2015 Thermal insulation products for buildings - Factory made wood wool (WW) products - Specification
	EN 13169:2012 + A1:2015 Thermal insulation products for buildings - Factory made expanded perlite board (EPB) products - Specification	
	3	EN 13171:2012 + A1:2015 Thermal insulation products for buildings - Factory made wood fibre (WF) products - Specification

<p>1999/93/EC (2011/246/EU) Ped. doors, windows, shutters, blinds, ind., comm. and garage doors and gates and related building hardware</p>	<p>3</p>	<p>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</p> <p>prEN 14351-2:2017²⁾ Windows and doors - Product standard, performance characteristics - Part 2: Internal pedestrian doorsets without resistance to fire and/or smoke leakage characteristics</p> <p>EN 13241:2003+A2:2016 Industrial, commercial and garage doors and gates – Product standard - Part 1: Products without fire resistance or smoke control characteristics</p> <p>EN 16361:2013 + A1:2016²⁾ Powered operated pedestrian doors - Product standard, performance characteristics - Pedestrian doorsets, other than swing type, initially designed for installation with power operation without resistance to fire and smoke leakage characteristics</p>
<p>2000/245/EC 2001/296/EC Flat glass, profiled glass and glass-block products</p>	<p>3</p>	<p>EN 572-9:2004 Glass in building - Basic soda lime silicate glass products - Part 9: Evaluation of conformity/Product standard</p> <p>EN 1096-4:2004 Glass in building - Coated glass - Part 4: Evaluation of conformity/Product standard</p> <p>EN 1279-5:2005+A2:2010 Glass in building - Insulating glass units - Part 5: Evaluation of conformity</p> <p>EN 1748-1-2:2004 Glass in building - Special basic products - Part 1-2: Borosilicate glasses; Evaluation of conformity/Product standard</p> <p>EN 1748-2-2:2004 Glass in building - Special basic product - Part 2-2: Glass ceramics - Evaluation of conformity/Product standard</p> <p>EN 1863-2:2004 Glass in building - Heat strengthened soda lime silicate glass - Part 2: Evaluation of conformity/Product standard</p>

<p>2000/245/EC 2001/296/EC Flat glass, profiled glass and glass-block products</p>	<p>3</p>	<p>EN 12150-2:2004 Glass in building - Thermally toughened soda lime silicate safety glass - Part 2: Evaluation of conformity/Product standard</p>
		<p>EN 12337-2:2004 Glass in building - Chemically strengthened soda lime silicate glass - Part 2: Evaluation of conformity/Product standard</p>
		<p>EN 13024-2:2004 Glass in building - Thermally toughened borosilicate safety glass - Part 2: Evaluation of conformity/Product standard</p>
		<p>EN 14178-2:2004 Glass in Building - Basic alkaline earth silicate glass products - Part 2: Evaluation of conformity/Product standard</p>
		<p>EN 14179-2:2005 Glass in building - Heat soaked thermally toughened soda lime silicate safety glass - Part 2: Evaluation of conformity/Product standard</p>
		<p>EN 14321-2:2005 Glass in building - Thermally toughened alkaline earth silicate safety glass - Part 2: Evaluation of conformity/Product standard</p>
		<p>EN 14449:2005+A1:2005 Glass in building - Laminated glass and laminated safety glass - Evaluation of conformity/Product standard</p>
<p>2000/447/EC Prefabricated wood- based load-bearing stressed skin panels and self-supporting composite lightweight panels</p>	<p>3</p>	<p>ETAG 016-1:2003 Guideline for European technical approval of self-supporting composite light weight panels - Part 1: General</p>
		<p>ETAG 016-2:2003 Guideline for European technical approval of self-supporting composite light weight panels - Part 2: Specific aspects relating to self-supporting composite lightweight panels for use in roofs</p>

<p>2000/447/EC Prefabricated wood- based load-bearing stressed skin panels and self-supporting composite lightweight panels</p>	<p>3</p>	<p>ETAG 016-3:2005 Guideline for European technical approval of self-supporting composite light weight panels - Part 3: Specific aspects relating to self-supporting composite lightweight panels for use in external walls and ceilings</p> <p>ETAG 016-4:2004 Guideline for European technical approval of self-supporting composite lightweight panels - Part 4: Specific aspects relating to self-supporting composite lightweight panels for use in internal walls and ceilings</p> <p>ETAG 019:2004 Guideline for European technical approval for prefabricated wood based loadbearing stressed skin panels</p>
<p>2011/19/EC Sealants for non- structural use in joints in buildings and pedestrian walkways</p>	<p>3</p>	<p>EN 15651-1: 2012 Sealants for non-structural use in joints in buildings and pedestrian walkways - Part 1: Sealants for facade elements</p> <p>EN 15651-2: 2012 Sealants for non-structural use in joints in buildings and pedestrian walkways - Part 2: Sealants for glazing</p> <p>EN 15651-3: 2012 Sealants for non-structural use in joints in buildings and pedestrian walkways - Part 3: Sealants for sanitary joints</p> <p>EN 15651-4: 2012 Sealants for non-structural use in joints in buildings and pedestrian walkways - Part 4: Sealants for pedestrian walkways</p>
<p>98/436/EC Roof coverings, rooflights, roof windows and ancillary products</p>	<p>3</p>	<p>EAD 320001-00-0605:2016-03²⁾ Joint sealing tape on basis of a pre-compressed flexible polyurethane foam for sealing around windows and joints in building facades</p>

¹⁾System for assessment and verification of constancy of performance;

²⁾Decision and harmonisation of the standard pending (foreseen as System: 3)

The requirements of testing laboratory in accordance with Article 43 of the Construction Products Regulation are fulfilled. Test methods, on which the determination of the product type is based, and which are not performed by the accreditation certificate holder, are indicated on the list of subcontractors.

The test laboratory is permitted to use various revisions of the product standards without the prior consent of “Deutsche Akkreditierungsstelle GmbH”.

5 Testing of reaction to fire, resistance to fire, external fire performance and acoustic performance of construction products, for which the reference to a relevant harmonised technical specification is not required (Clause 3. Annex V, (EU) no. 305/2011) – (R, TZ)

5.1 Reaction to fire

EN ISO 1182 2010-10	Reaction to fire tests for products - Non-combustibility test	R, TZ
EN ISO 1716 2010-11	Reaction to fire tests for products - Determination of the gross heat of combustion (calorific value)	R, TZ
EN ISO 9239-1 2010-11	Reaction to fire tests for floorings - Part 1: Determination of the burning behaviour using a radiant heat source	R, TZ
EN ISO 11925-2 2011-02	Reaction to fire tests - Ignitability of products subjected to direct impingement of flame - Part 2: Single-flame source test	R, TZ

5.2 Resistance to fire (R, TZ)

EN 1364-1 2015-09	Fire resistance tests for non-loadbearing elements - Part 1: Walls	R, TZ
EN 1364-2 2018-03	Fire resistance tests for non-loadbearing elements - Part 2: Ceilings	R, TZ
EN 1364-3 2014-05	Fire resistance tests for non-loadbearing elements - Part 3: Curtain walling - Full configuration	R, TZ
EN 1364-4 2014-05	Fire resistance tests for non-loadbearing elements – Part 4: Curtain walling - Part configuration	R, TZ

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EN 1365-2 2015-02	Fire resistance tests for loadbearing elements - Part 2: Floors and roofs	R, TZ
EN 1366-3 2009-07	Fire resistance tests for service installations - Part 3: Penetration seals	R, TZ
EN 1634-1 2018-04	Fire resistance and smoke control tests for door and shutter assemblies, openable windows and elements of building hardware - Part 1: Fire resistance test for door and shutter assemblies and openable windows	R, TZ
EN 1634-2 2009-05	Fire resistance and smoke control tests for door, shutter and openable window assemblies and elements of building hardware - Part 2: Fire resistance characterisation test for elements of building hardware	R, TZ
EN 1634-3 2005-01	Fire resistance and smoke control tests for door and shutter assemblies, openable windows and elements of building hardware - Part 3: Smoke control test for door and shutter assemblies + Corrigendum	R, TZ

5.3 External fire performance

CEN/TS 1187 2012-03	Test methods for external fire exposure to roofs	R, TZ
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5.4 Acoustic performance

EN ISO 10140-1 2016-12	Acoustics - Laboratory measurement of sound insulation of building elements - Part 1: Application rules for specific products (ISO 10140-1:2016)	R, S
EN ISO 10140-3 2015-11	Acoustics - Laboratory measurement of sound insulation of building elements - Part 3: Measurement of impact sound insulation (EN ISO10140-3:2010 + A1:2015)	R,S

The requirements of testing laboratory in accordance with Article 43 of the Construction Products Regulation are fulfilled.

Valid from: 2021-12-21
Date of issue: 2021-12-21

Abbreviations used:

AAMA	American Architectural Manufacturers Association
ASTM	American Society for Testing and Materials
DIBt	Deutsches Institut für Bautechnik (German Institute for Civil Engineering and Construction)
ETAG	European Technical Approval Guidelines (used as EAD)
ift-Guideline	Guidelines of ift Rosenheim
RAL (RG/GZ)	Gütegemeinschaften des Deutschen Instituts für Gütesicherung u. Kennzeichnung e.V. (Association of German Institute for Quality Control and Marking)
SVA	Sachverständigenausschuss (Experts Committee)
TBDK	Richtlinie der Gütegemeinschaft Schlösser und Beschläge e.V. (Guidelines from the Association of Locks and Fittings)