Deutsche Akkreditierungsstelle GmbH

Annex to the Accreditation Certificate D-PL-11021-01-00 according to DIN EN ISO/IEC 17025:2018

Indefinite since: 29.04.2019
Date of issue: 29.04.2019

Holder of certificate:
Gesellschaft für Materialforschung und Prüfungsanstalt für das Bauwesen Leipzig mbH

For its testing laboratories

Mineral building materials,
Metal construction, fastening and joining technology,
Construction chemistry and environmental analytics,
Experimental structural mechanics
Thermal insulation and moisture protection,
Sound insulation,
Structural sealing,
Subsoil and road construction laboratory, aggregates
Hans-Weigel-Straße 2B, 04319 Leipzig

and

Fire behaviour of building materials
Fire behaviour of structural components and special constructions
Hans-Weigel-Straße 2B, 04319 Leipzig
MFPA-Allee 1, 04509 Laue

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

Abbreviations used: see last page

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

Testing of mechanical, physical and geometrical properties, the durability of concrete, fibre concrete, concrete products, mortar, binder, aggregates, subsoil, wood and wood-based materials, sealing sheets and coatings for sealing the buildings of insulating and non-insulating materials;
testing of watertightness, consistency and aging of sealing sheets and coatings, functionality of sealing procedure and injection materials, environmental compatibility of sealing products and injection materials, testing of chemical consistency, consistency against environmental factors and ageing behaviour, identification tests and quantitative analysis of mineral building products and binder, plastics, sealing and coating materials, textile and fibre-reinforced materials and polymer fibres for concrete and laminates; testing of mechanical, physical and geometric properties, durability, chemical analysis, stationary and ambulant metallography and nondestructive testing of metallic materials, welded joints, steel and polymer fibres for concrete, reinforcements and concrete reinforcement steel products, anticorrosive coatings and components of the sanitary and heating construction, building and metal constructions; Optical emission spectroscopy (OES) for steel and iron materials and non-iron materials; experimental testing for structural safety of existing constructions and constructional elements; testing of post tensioning kits for prestressing of structures; testing of mechanical, physical and geometrical properties and of usability and load bearing capacity of pipe systems, seepage elements, pipes and manholes of plastic, concrete, reinforced concrete and stoneware as well as manhole covers, pipe joints and seals, drainage channels, steps and fixed ladders; testing of thermical and hygrical properties, thermal conductivity, water vapour transmission, dynamical stiffness and flow resistance of insulating and non-insulating materials; hygrothermal behaviour of external walls in the wall test rig; testing of burglar resistance, testing of permanent functionality and smoke-tightness of windows, doors and gates; testing of acoustical and mechanical properties as well as acoustical and mechanic long term performance of road traffic noise reducing devices, noise protection walls and cognate appliance to the influence of airborne sound expansion; determination of airborne and impact sound insulation, of reduction and acoustical absorption in constructional elements;
determination and testing of emissions and immisions of noise (group V) and vibrations (group VI) – within the scope of module Immssion control;

Testing of fire behaviour and fire resistance of building materials, structural components construction products and builds;

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

Tests of reaction to fire, of resistance to fire, of external fire performance and of noise absorption, for which the reference to a relevant harmonised technical specification is not required (point 3. Annex V, (EU) Nr. 305/2011)

-Translation-

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The testing methods are identified with the symbols below, according to the sites where the testing was performed:

\begin{align*}
\text{Le} &= \text{Leipzig} \\
\text{La} &= \text{Laue}
\end{align*}

Within the given testing field marked with 
\textit{\textbullet}, the testing laboratory is permitted, without being required to inform and obtain prior approval from DAkkS, the free choice of standard or equivalent testing methods. The listed testing methods are exemplary. The testing laboratory maintains a current list of all testing methods within the flexible scope of accreditation.

The testing laboratory is permitted, without being required to inform and obtain prior approval from DAkkS, to use standards or equivalent testing methods listed here with different issue dates. The testing laboratory maintains a current list of all testing methods within the flexible scope of accreditation.

1 Concrete and concrete products (Le)

1.1 Concrete

\begin{itemize}
  \item DIN 1048-2 1991-06 \hspace{1cm} Testing concrete; testing of hardened concrete (specimens taken in situ) \hspace{1cm} (\textit{withdrawn standard})
  \item DIN 52108 2010-05 \hspace{1cm} Testing of inorganic non-metallic materials - Wear test using the grinding wheel according to Böhme - Grinding wheel method
  \item DIN EN 480-11 2005-12 \hspace{1cm} Admixtures for concrete, mortar and grout - Test methods - Part 11: Determination of air void characteristics in hardened concrete
  \item DIN EN 12350-1 2009-08 \hspace{1cm} Testing fresh concrete - Part 1: Sampling
  \item DIN EN 12350-3 2009-08 \hspace{1cm} Testing fresh concrete - Part 3: Vebe test
  \item DIN EN 12390-1 2012-12 \hspace{1cm} Testing hardened concrete - Part 1: Shape, dimensions and other requirements for specimens and moulds
\end{itemize}

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DIN EN 12390-2 2009-08 + Corrigendum 1 2012-02 + Amendment A20 2015-20
Testing hardened concrete - Part 2: Making and curing specimens for strength tests

DIN EN 12390-3 2009-07 + Corrigendum1 2011-11
Testing hardened concrete - Part 3: Compressive strength of test specimens

DIN EN 12390-5 2009-07
Testing hardened concrete - Part 5: Flexural strength of test specimens

DIN EN 12390-8 2009-07
Testing hardened concrete - Part 8: Depth of penetration of water under pressure

ISO 1920-4 2005-07
Testing of concrete - Part 4: Strength of hardened concrete

DAfStb Manual 401 1989
Instructions for the determination of chlorine content in concrete - Section 4.5: Chloride content determination by photometry

BAW-leaflet 2012-11
Resistance of concrete to chloride ingress

NT Build 492 1999-11
Concrete, mortar and cement-based repair materials: Chloride migration coefficient from non-steady-state migration experiments

1.2 Fibre concrete

DIN EN 14488-3 2006-09
Testing sprayed concrete - Part 3: Flexural strengths (first peak, ultimate and residual) of fibre reinforced beam specimens

DIN EN 14651 2007-12
Test method for metallic fibre concrete - Measuring the flexural tensile strength (limit or proportionality (LOP), residual)

DAfStb Guidelines 2012-11
Guidelines of the German Reinforced Steel Committee „Steel fibre concrete“

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Abbreviations used: see last page

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DBV-Merkblatt (leaflet) 2001-10
Steel fibre concrete

ÖBVV-Richtlinie (directive) 2015-04

ÖVBB-Richtlinie (directive) 2008-07
Fibre-reinforced concrete - Determination of polypropylene (PP) fibre content in hardened concrete (microfibres), Annex 6

1.3 Precast concrete, concrete goods

DIN 483 2005-10
Concrete kerb units - Shapes, dimensions, marking

DIN EN 679 2005-09
Determination of the compressive strength of autoclaved aerated concrete

DIN EN 772-1 2016-05
Methods of test for masonry units - Part 1: Determination of compressive strength

DIN EN 1170-5 1998-01
Precast concrete products - Test method for glass-fibre reinforced cement - Part 5: Measuring bending strength; "complete bending test" method

DIN EN 1338 2003-08 + Corrigendum 1 2006-11
Concrete paving blocks - Requirements and test methods – Annexes C, D, E, F, H and J

DIN EN 1339 2003-08 + Corrigendum 1 2006-11
Concrete paving flags - Requirements and test methods - Annexes C, D, E, F, H and J

DIN EN 1340 2003-08 + Corrigendum 1 2006-11
Concrete kerb units - Requirements and test methods - Annexes C, D, E, F, H and J

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DIN EN 12504-1 2009-07
Testing concrete in structures - Part 1: Cored specimens - Taking, examining and testing in compression

DIN EN 13791 2008-05+
Assessment of in-situ compressive strength in structures and precast concrete components

**1.4 Concrete construction**

EAD 160004-00-0301
Post-tensioning systems for prestressing of structures except Annex C.2.2 - statistical loading in low temperatures

ETAG 013 2006-05

DIN EN 13391 2004-06
Mechanical tests for post-tensioning systems

**Experimental testing for structural safety of existing constructions and constructional elements**

*The testing areas for flexible accreditation are characterised by the measured values in the table below.*

<table>
<thead>
<tr>
<th>Type of test</th>
<th>Measurand/test parameter</th>
<th>Measurement and test range</th>
<th>max. uncertainty of measurement</th>
<th>Testing standard/characteristic method*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bending Pull Compression</td>
<td>Deformation with DMS</td>
<td>0 - 200.000 μm/m</td>
<td>5,00 %</td>
<td>DAFStb-Rili Load tests on concrete structures</td>
</tr>
<tr>
<td></td>
<td>Deformation</td>
<td>0 – 500 mm</td>
<td>1,20 %</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Force</td>
<td>0 – 5000 kN</td>
<td>0,75 %</td>
<td></td>
</tr>
<tr>
<td>Dimensions</td>
<td>Length</td>
<td>0 – 300 mm</td>
<td>1,20 %</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>0 – 200 m</td>
<td>1,50 %</td>
<td></td>
</tr>
</tbody>
</table>

Due to the nature of the technique, there is no total uncertainty in the overall result. The permisssible normative load capacities given in the result are on the basis of the addition of the individual uncertainties and their consideration in the transmission factor is always on the safe side.

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### Characteristic testing method *

<table>
<thead>
<tr>
<th>DAfSt-Richtlinie (directive)</th>
<th>Load tests on concrete structures</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000-09</td>
<td></td>
</tr>
</tbody>
</table>

### 2. Binder (Le)

<table>
<thead>
<tr>
<th>Standard</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIN 18555-3</td>
<td>Testing of mortars containing mineral binders; hardened mortars; determination of flexural strength, compressive strength and bulk density <em>(withdrawn standard)</em></td>
</tr>
<tr>
<td>1982-09</td>
<td></td>
</tr>
<tr>
<td>DIN EN 196-1</td>
<td>Methods of testing cement - Part 1: Determination of strength</td>
</tr>
<tr>
<td>2016-11</td>
<td></td>
</tr>
<tr>
<td>DIN EN 196-2</td>
<td>Method of testing cement - Part 2: Chemical analysis of cement clause 4.4.2 Determination of the sulphate</td>
</tr>
<tr>
<td>2013-10</td>
<td></td>
</tr>
<tr>
<td>DIN EN 1015-2</td>
<td>Methods of test for mortar for masonry - Part 2: Bulk sampling of mortars and preparation of test mortars</td>
</tr>
<tr>
<td>2007-05</td>
<td></td>
</tr>
<tr>
<td>DIN EN 1015-3</td>
<td>Methods of test for mortar for masonry - Part 3: Determination of consistence of fresh mortar (by flow table)</td>
</tr>
<tr>
<td>2007-05</td>
<td></td>
</tr>
<tr>
<td>DIN EN 1015-6</td>
<td>Methods of test for mortar for masonry - Part 6: Determination of bulk density of fresh mortar</td>
</tr>
<tr>
<td>2007-05</td>
<td></td>
</tr>
<tr>
<td>DIN EN 1015-7</td>
<td>Methods of test for mortar for masonry - Part 7: Determination of air content of fresh mortar</td>
</tr>
<tr>
<td>1998-12</td>
<td></td>
</tr>
<tr>
<td>DIN EN 1015-11</td>
<td>Methods of test for mortar for masonry - Part 11: Determination of flexural and compressive strength of hardened mortar</td>
</tr>
<tr>
<td>2007-05</td>
<td></td>
</tr>
<tr>
<td>DIN EN 12004-02</td>
<td>Adhesives for ceramic tiles - Part 2: Test methods</td>
</tr>
<tr>
<td>2017-05</td>
<td></td>
</tr>
<tr>
<td>DIN EN 12467</td>
<td>Fibre-cement flat sheets - Product specification and test methods clause 7.3.5: Warm water clause 7.4.6: Soak-dry clause 7.4.1: Freeze-thaw</td>
</tr>
<tr>
<td>2018-07</td>
<td></td>
</tr>
</tbody>
</table>

**Abbreviations used:** see last page

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2.1 Testing of mineral-based constructional material behaviour under climatic stressing (with and without de-icing agent)*

The testing areas for flexible accreditation are characterised by the measured values in the table below.

<table>
<thead>
<tr>
<th>Type of test</th>
<th>Measurand/test parameter</th>
<th>Measurement and test range</th>
<th>Uncertainty of measurement</th>
<th>Testing standard/characteristic method*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Climatic stressing</td>
<td>Weathering amount due to freeze-thaw test with de-icing salt</td>
<td>0 to 1.5 kg/m²</td>
<td>5 %</td>
<td>DIN EN 1338</td>
</tr>
<tr>
<td></td>
<td>Weathering amount CDF due to freeze-thaw test with de-icing salt</td>
<td>0 to 1.5 kg/m²</td>
<td>5 %</td>
<td>DIN EN 1339</td>
</tr>
<tr>
<td></td>
<td>Weathering amount CIF due to freeze-thaw test with de-icing salt</td>
<td>0 to 0.5 kg/m²</td>
<td>5 %</td>
<td>DIN EN 1340</td>
</tr>
<tr>
<td></td>
<td>Weathering amount CF/CDF due to freeze-thaw test with de-icing salt</td>
<td>0 to 1.5 kg/m²</td>
<td>5 %</td>
<td>CEN/TS 12390-9</td>
</tr>
</tbody>
</table>

**Characteristic testing methods**

- DIN EN 1338 2003-08 + Corrigendum 1 2006-11: Concrete paving blocks - Requirements and test methods - Annex D: Determination of freeze-thaw resistance with de-icing salt
- DIN EN 1339 2003-08 + Corrigendum 1 2006-11: Concrete paving flags - Requirements and test methods - Annex D: Determination of freeze-thaw resistance with de-icing salt
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DIN EN 1340 2003-08 + Corrigendum 1 2006-11
Concrete kerb units - Requirements and test methods - Annex D: Determination of freeze-thaw resistance with de-icing salt

DIN CEN/TS 12390-9 2017-05
Testing hardened concrete - Part 9: Freeze-thaw resistance - Scaling

Saxonian Testing Guidelines 2002-12 in conjunction with SMWA directive of 11.01.2005
Testing of concrete – Determination of the freeze-thaw resistance of cement-bound constructional elements (in German)

BAW leaflet "Frostprüfung" (Freeze test) 2012-09
Freeze test for concrete (in German)

3. Aggregates (Le)

DIN EN 932-1 1996-11
Test for general properties of aggregates - Part 1: Methods for sampling

DIN EN 932-2 1999-03
Test for general properties of aggregates - Part 2: Methods for reducing laboratory samples

DIN EN 932-3 2003-12
Tests for general properties of aggregates - Part 3: Procedure and terminology for simplified petrographic description

DIN EN 933-1 2012-03
Tests for geometrical properties of aggregates - Part 1: Determination of particle size distribution - Sieving method

DIN EN 933-2 1996-01
Test for geometrical properties of aggregates - Part 2: Determination of particle size distribution; test sieves, nominal size of apertures

DIN EN 933-3 2012-04
Tests for geometrical properties of aggregates - Part 3: Determination of particle shape - Flakiness index

DIN EN 933-4 2015-01
Tests for geometrical properties of aggregates - Part 4: Determination of particle shape - Shape index

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<table>
<thead>
<tr>
<th>Standard ID</th>
<th>Description</th>
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<tbody>
<tr>
<td>DIN EN 933-5 2005-02</td>
<td>Tests for geometrical properties of aggregates - Part 5: Determination of percentage of crushed and broken surfaces in coarse aggregate particles</td>
</tr>
<tr>
<td>DIN EN 933-6 2014-07</td>
<td>Test for geometrical properties of aggregates - Determination of surface characteristics - Part 6: Flow coefficient of aggregates</td>
</tr>
<tr>
<td>DIN EN 933-7 1998-05</td>
<td>Tests for geometrical properties of aggregates - Part 7: Determination of shell content; percentage of shells in coarse aggregates</td>
</tr>
<tr>
<td>DIN EN 933-11 2011-05</td>
<td>Tests for geometrical properties of aggregates - Part 11: Classification test for the constituents of coarse recycled aggregate</td>
</tr>
<tr>
<td>DIN EN 1097-2 2010-07</td>
<td>Tests for mechanical and physical properties of aggregates - Part 2: Methods for the determination of resistance to fragmentation</td>
</tr>
<tr>
<td>DIN EN 1097-3 1998-06</td>
<td>Tests for mechanical and physical properties of aggregates - Part 3: Determination of loose bulk density and voids</td>
</tr>
<tr>
<td>DIN EN 1097-5 2008-06 + Corrigendum 1 2008-09</td>
<td>Tests for mechanical and physical properties of aggregates - Part 5: Determination of the water content by drying in a ventilated oven</td>
</tr>
<tr>
<td>DIN EN 1097-6 2013-09</td>
<td>Tests for mechanical and physical properties of aggregates - Part 6: Determination of particle density and water absorption</td>
</tr>
<tr>
<td>DIN EN 1367-1 2007-06</td>
<td>Tests for thermal and weathering properties of aggregates - Part 1: Determination of resistance to freezing and thawing</td>
</tr>
<tr>
<td>DIN EN 1367-2 2010-02</td>
<td>Tests for thermal and weathering properties of aggregates - Part 2: Magnesium sulfate test</td>
</tr>
<tr>
<td>DIN EN 1367-5 2011-04</td>
<td>Tests for thermal and weathering properties of aggregates - Part 5: Determination of resistance to thermal shock</td>
</tr>
</tbody>
</table>

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DIN EN 1367-6 2008-12
Tests for thermal and weathering properties of aggregates - Part 6: Determination of resistance to freezing and thawing in the presence of salt (NaCl)

DIN EN 1744-1 2013-03
Tests for chemical properties of aggregates - Part 1: Chemical analysis clauses 14.2, 15.1 and 17

4. Subsoil /soil (Le)

DIN 18123 2011-04
Soil, investigation and testing - Determination of grain-size distribution (withdrawn standard)

DIN 18124 2011-04
Soil, investigation and testing - Determination of density of solid particles - Capillary pyknometer, wide mouth pycnometer, gas pycnometer without 7.5 – gas pycnometer (withdrawn standard)

DIN 18128 2002-12
Soil - Investigation and testing - Determination of ignition loss

DIN EN ISO 17892-1 2015-03
Geotechnical investigation and testing - Laboratory testing of soil - Part 1: Determination of water content

DIN EN ISO 17892-3 2016-07
Geotechnical investigation and testing - Laboratory testing of soil - Part 3: Determination of particle density

DIN EN ISO 17892-4 2017-04
Geotechnical investigation and testing - Laboratory testing of soil - Part 4: Determination of particle size distribution

5. Metallic material, metallic alloys and coatings, metal construction (Le)

5.1 Metallic materials

ISO 4968 1979-11
Steel; Macrographic examination by sulfur print (Baumann method)

Abbreviations used: see last page

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5.2 Metallic alloys

DIN 54150 1977-08 Non-destructive testing; impression methods for surface examination (Replica-technique) *(withdrawn standard)*

DIN EN ISO 1463 2004-08 Metallic and oxide coatings - Measurement of coating thickness - Microscopical method

DIN EN ISO 2178 2016-11 Non-magnetic coatings on magnetic substrates - Measurement of coating thickness - Magnetic method

DIN EN ISO 2360 2017-12 Non-conductive coatings on non-magnetic electrically conductive basis materials - Measurement of coating thickness - Amplitude-sensitive eddy current method

PrüfV-1.2-8/1_VA Internal test procedure 01.08.2016 Optical spark emission spectroscopy (OES) for the determination of 19 elements in steel and iron materials and in copper- and aluminium-based alloys

5.3 Metal constructions

DIN EN ISO 17639 2013-12 Destructive tests on welds in metallic materials - Macroscopic and microscopic examination of welds

5.4 Fibres for concrete

DIN EN 14889-1 2006-11 Fibres for concrete - Part 1: Steel fibres - Definitions, specifications and conformity
5.5 Mechanical testing of metallic materials, constructional elements and metal constructions*

The testing areas for flexible accreditation are characterised by the measured values in the table below.

<table>
<thead>
<tr>
<th>Type of test</th>
<th>Measurand/test parameter</th>
<th>Measurement and test range</th>
<th>Uncertainty of measurement</th>
<th>Testing standard/characteristic method*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compression</td>
<td>Force</td>
<td>0 - 1500 kN</td>
<td>0,7 %</td>
<td>DIN 50106</td>
</tr>
<tr>
<td>Traction</td>
<td>Force</td>
<td>0 - 1500 kN</td>
<td>0,7 %</td>
<td>DIN EN ISO 6892-1</td>
</tr>
<tr>
<td>Shear load</td>
<td>Force</td>
<td>0 - 400 kN</td>
<td>0,7 %</td>
<td>DIN EN ISO 15630-1</td>
</tr>
<tr>
<td>Vibration</td>
<td>Force</td>
<td>0 - 500 kN</td>
<td>0,7 %</td>
<td>DIN 50100</td>
</tr>
<tr>
<td></td>
<td>Load cycle</td>
<td>-150 to 150 kN 0 - 100^6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hardness</td>
<td>HB</td>
<td>HBW 2,5/15,6 to HBW 2,5/187,5</td>
<td>2,2 %</td>
<td>DIN EN ISO 6506-1</td>
</tr>
<tr>
<td></td>
<td>HV</td>
<td>HV1 - HV30</td>
<td>2,2 %</td>
<td>DIN EN ISO 6507-1</td>
</tr>
<tr>
<td></td>
<td>HRC</td>
<td>HRC20-HRC60</td>
<td>2,2 %</td>
<td>DIN EN ISO 6508-1</td>
</tr>
<tr>
<td>Impact loading</td>
<td>Impact energy</td>
<td>0 - 300 J</td>
<td>4,4 %</td>
<td>DIN EN ISO 148-1</td>
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<tr>
<td></td>
<td>Temperature</td>
<td>-20 °C to 40°C</td>
<td>0,8 K</td>
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</tr>
<tr>
<td>Bending</td>
<td>Angle</td>
<td>0 - 180°</td>
<td>1 % 14'</td>
<td>DIN EN ISO 7438</td>
</tr>
<tr>
<td>Deformation</td>
<td>Trajectory</td>
<td>10 - 200 mm 0 - 400 mm</td>
<td>0,6 % 0,7%</td>
<td>DIN EN ISO 6892-1</td>
</tr>
</tbody>
</table>

5) lowest achievable uncertainty of measurement

**Characteristic testing methods** *

- **DIN 488-2** 2009-08
  Reinforcing steels - Reinforcing steel bars
  clause 7.3.3 – Bend performance
  clause 7.3.6 – Surface geometry

- **DIN 488-3** 2009-08
  Reinforcing steels - Reinforcing steel in coils, steel wire
  clause 7.3.4 – Bend performance
  clause 7.3.7 – Surface geometry

- **DIN 488-4** 2009-08
  Reinforcing steels - Welded fabric
  clause 6.2.2 – Shear force of the welded joints
  clause 6.2.5 – Bend test on the weld
  clause 6.3 – Dimensions and masses

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DIN 488-5 Reinforcing steels - Lattice girders
2009-08 clause 6.2.2 – Shear force of the welded joints
clause 6.3 – Form, dimensions and limit deviations of the lattice girders

DIN 50100 Load controlled fatigue testing - Execution and evaluation of cyclic tests at constant load amplitudes on metallic specimens and components
2016-12

DIN 50106 Testing of metallic materials - Compression test at room temperature
2016-11

DIN 50141 Testing of metals; Shear test (withdrawn standard)
1982-01

DIN EN 10002-1 Metallic materials - Tensile testing - Part 1: Method of testing at ambient temperature (withdrawn standard, replaced by DIN EN ISO 6892-1)
2001-12

DIN EN 10080 Steel for the reinforcement of concrete - Weldable reinforcing steel – General - clause 9, Annexes B-D
2005-08

DIN EN 14195 Metal framing components for gypsum plasterboard systems - Definitions, requirements and test methods clause 5.1
2015-03

DIN EN ISO 148-1 Metallic materials - Charpy pendulum impact test - Part 1: Test method (here: only temperature range: -40°C to room temperature)
2017-05

DIN EN ISO 6506-1 Metallic materials - Brinell hardness test - Part 1: Test method
2015-02

2018-07

DIN EN ISO 6892-1 Metallic materials - Tensile testing - Part 1: Method of test at room temperature
2017-02

DIN EN ISO 6892-2 Metallic materials - Tensile testing - Part 2: Method of test at elevated temperature
2018-09

DIN EN ISO 7438 Metallic materials - Bend test
2016-07

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<table>
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<tbody>
<tr>
<td>DIN EN ISO 15630-1</td>
<td>Steel for the reinforcement and prestressing of concrete - Test methods - Part 1: Reinforcing bars, wire rod and wire</td>
</tr>
<tr>
<td>DIN EN ISO 15630-2</td>
<td>Stähle für die Bewehrung und das Vorspannen von Beton - Prüfverfahren - Teil 2: Geschweißte Matten</td>
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<tr>
<td>DIN EN ISO 15630-3</td>
<td>Steel for the reinforcement and prestressing of concrete - Test methods - Part 3: Prestressing steel</td>
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<tr>
<td>DIN EN ISO 17660-1</td>
<td>Welding - Welding of reinforcing steel - Part 1: Load-bearing welded joints</td>
</tr>
<tr>
<td>DIN EN ISO 17660-2</td>
<td>Welding - Welding of reinforcing steel - Part 2: Non load-bearing welded joints</td>
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### 6. Wood and wood-based materials (Le)

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<td>DIN EN 310</td>
<td>Wood-based panels; determination of modulus of elasticity in bending and of bending strength</td>
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<tr>
<td>DIN EN 314-1</td>
<td>Plywood - Bonding quality - Part 1: Test methods</td>
</tr>
<tr>
<td>DIN EN 317</td>
<td>Particleboards and fibreboards; determination of swelling in thickness after immersion in water</td>
</tr>
<tr>
<td>DIN EN 318</td>
<td>Wood-based panels - Determination of dimensional changes associated with changes in relative humidity</td>
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<tr>
<td>DIN EN 319</td>
<td>Particleboards and fibreboards; determination of tensile strength perpendicular to the plane of the board</td>
</tr>
<tr>
<td>DIN EN 320</td>
<td>Particleboards and fibreboards - Determination of resistance to axial withdrawal of screws</td>
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<tr>
<td>DIN EN 321</td>
<td>Wood-based panels - Determination of moisture resistance under cyclic test conditions</td>
</tr>
<tr>
<td>DIN EN 324-1</td>
<td>Wood-based panels; determination of dimensions of boards; part 1: determination of thickness, width and length</td>
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DIN EN 324-2 1993-08
Wood-based panels; determination of dimensions of boards; part 2: determination of squareness and edge straightness

DIN EN 408 2012-10
Timber structures - Structural timber and glued laminated timber - Determination of some physical and mechanical properties

DIN EN 594 2011-09
Timber structures - Test methods - Racking strength and stiffness of timber frame wall panels

DIN EN 596 1996-07
Timber structures - Test methods - Soft body impact test of timber framed walls

DIN EN 789 2005-01
Timber structures - Test methods - Determination of mechanical properties of wood based panels

DIN EN 1087-1 1995-04
Particleboards - Determination of moisture resistance - Part 1: Boil test

DIN EN 1156 2013-10
Wood-based panels - Determination of duration of load and creep factors

DIN EN 1195 1998-06
Timber structures - Test methods - Performance of structural floor decking

DIN EN 12871 2013-09
Wood-based panels - Determination of performance characteristics for load bearing panels for use in floors, roofs and walls

DIN EN 13354 2009-02
Solid wood panels (SWP) - Bonding quality - Test method

DIN EN 14279 2009-07
Laminated veneer lumber (LVL) - Definitions, classification and specifications

DIN EN 14755 2006-01
Extruded particleboards - Specifications

7. Insulating materials (Le)

DIN EN 822 2013-05
Thermal insulating products for building applications - Determination of length and width

-Translation-

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<tr>
<td>DIN EN 823</td>
<td>Thermal insulating products for building applications - Determination of thickness</td>
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<td>DIN EN 824</td>
<td>Thermal insulating products for building applications - Determination of squareness</td>
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<td>DIN EN 825</td>
<td>Thermal insulating products for building applications - Determination of flatness</td>
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<tr>
<td>DIN EN 826</td>
<td>Thermal insulating products for building applications - Determination of compression behaviour</td>
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<td>DIN EN 1602</td>
<td>Thermal insulating products for building applications - Determination of the apparent density</td>
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<tr>
<td>DIN EN 1603</td>
<td>Thermal insulating products for building applications - Determination of dimensional stability under constant normal laboratory conditions (23 °C/ 50 % relative humidity)</td>
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<tr>
<td>DIN EN 1604</td>
<td>Thermal insulating products for building applications - Determination of dimensional stability under specified temperature and humidity conditions</td>
</tr>
<tr>
<td>DIN EN 1605</td>
<td>Thermal insulating products for building applications - Determination of deformation under specified compressive load and temperature conditions</td>
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<tr>
<td>DIN EN 1606</td>
<td>Thermal insulating products for building applications - Determination of compressive creep</td>
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<tr>
<td>DIN EN 1607</td>
<td>Thermal insulating products for building applications - Determination of tensile strength perpendicular to faces</td>
</tr>
<tr>
<td>DIN EN 1608</td>
<td>Thermal insulating products for building applications - Determination of tensile strength parallel to faces</td>
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<tr>
<td>DIN EN 1609</td>
<td>Thermal insulating products for building applications - Determination of short term water absorption by partial immersion</td>
</tr>
<tr>
<td>DIN EN 12085</td>
<td>Thermal insulating products for building applications - Determination of linear dimensions of test specimen</td>
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DIN EN 12087 2013-06
Thermal insulating products for building applications - Determination of long term water absorption by immersion

DIN EN 12088 2013-06
Thermal insulating products for building applications - Determination of long term water absorption by diffusion

DIN EN 12089 2013-06
Thermal insulating products for building applications - Determination of bending behaviour

DIN EN 12090 2013-06
Thermal insulating products for building applications - Determination of shear behaviour

DIN EN 12091 2013-06
Thermal insulating products for building applications - Determination of freeze-thaw resistance

DIN EN 12431 2013-05
Thermal insulating products for building applications - Determination of thickness for floating floor insulating products (compressibility)

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

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

DIN EN 13496 2013-12
Thermal insulation products for building applications - Determination of the mechanical properties of glass fibre meshes as reinforcement for External Thermal Insulation Composite Systems with renders (ETICS)

DIN EN ISO 12570 2018-07
Hygrothermal performance of building materials and products - Determination of moisture content by drying at elevated temperature

DIN EN ISO 12571 2013-12
Hygrothermal performance of building materials and products - Determination of hygroscopic sorption properties
ETAG 004
2013-02

Guideline for European Technical Approval of external thermal insulation composite systems (ETICS) with rendering clause
clause 5.6.7.1: Textiles glass grids - tear strength and displacement of reinforced fabric

Internal test procedure
PrüfV-4.1-25
07.03.2014

Testing of specific heat capacity – Kohlrausch method

7.1 Water vapour transmission properties*

The testing areas for flexible accreditation are characterised by the measured values in the table below.

<table>
<thead>
<tr>
<th>Type of test</th>
<th>Measurand/test parameter</th>
<th>Measurement and test range</th>
<th>Uncertainty of measurement</th>
<th>Testing standard/characteristic method*</th>
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<tbody>
<tr>
<td>Water vapour permeability</td>
<td>Water vapour diffusion resistance coefficient $\mu$ and water vapour diffusion-equivalent air layer thickness $s_d$</td>
<td>0,1 m to 1500 m</td>
<td>1,8 %</td>
<td>DIN 53122-1 2001-06</td>
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<td>DIN EN 772-15 2009-09</td>
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<td>DIN EN 1931 2001-03</td>
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<td>DIN EN 12086 2013-06</td>
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<td>DIN EN ISO 7783 2012-02</td>
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<td>DIN EN ISO 12572 2001-09</td>
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Characteristic testing methods *

DIN 53122-1 2001-08

Testing of plastics and elastomer films, paper, board and other sheet materials - Determination of water vapour transmission - Part 1: Gravimetric method

DIN EN 772-15 2000-09

Methods of test for masonry units - Part 15: Determination of water vapour permeability of autoclaved aerated concrete masonry units

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<tbody>
<tr>
<td>DIN EN 1931 2001-03</td>
<td>Flexible sheets for waterproofing - Bitumen, plastic and rubber sheets for roof waterproofing - Determination of water vapour transmission properties</td>
</tr>
<tr>
<td>DIN EN 12086 2013-06</td>
<td>Thermal insulating products for building applications - Determination of water vapour transmission properties</td>
</tr>
<tr>
<td>DIN EN ISO 7783 2019-02</td>
<td>Paints and varnishes - Determination of water-vapour transmission properties - Cup method</td>
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<td>DIN EN ISO 12572 2017-05</td>
<td>Hygrothermal performance of building materials and products - Determination of water vapour transmission properties - Cup method</td>
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8. Plastics (Le)

8.1 Material characteristics

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<tbody>
<tr>
<td>DIN EN 59 2016-06</td>
<td>Glass reinforced plastics; Measurement of hardness by means of a Barcol impressor</td>
</tr>
<tr>
<td>DIN EN 580 2003-08</td>
<td>Plastics piping systems - Unplasticized poly(vinyl chloride) (PVC-U) pipes - Test method for the resistance to dichloromethane at a specified temperature (DCMT) (withdrawn standard)</td>
</tr>
<tr>
<td>DIN EN 61006 2004-11</td>
<td>Electrical insulating materials - Methods of test for the determination of the glass transition temperature</td>
</tr>
<tr>
<td>DIN EN ISO 62 2008-05</td>
<td>Plastics - Determination of water absorption</td>
</tr>
<tr>
<td>DIN EN ISO 178 2013-09</td>
<td>Plastics - Determination of flexural properties</td>
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<tr>
<td>DIN EN ISO 179-1 2010-11</td>
<td>Plastics - Determination of Charpy impact properties - Part 1: Non-instrumented impact test</td>
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<tr>
<td>DIN EN ISO 604 2003-12</td>
<td>Plastics – Determination of compressive properties</td>
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DIN EN ISO 1133-1 2012-03  
Plastics - Determination of the melt mass-flow rate (MFR) and melt volume-flow rate (MVR) of thermoplastics - Part 1: Standard method  
here: Determination of the melt mass-flow rate (MFR)

DIN EN ISO 1183-1 2013-04  
Plastics - Methods for determining the density of non-cellular plastics - Part 1: Immersion method, liquid pycnometer method and titration method (ISO 1183-1:2012);  
Method A - immersion method  
Method B - liquid pycnometer method and titration method

DIN EN ISO 2039-1 2003-06  
Plastics - Determination of hardness - Part 1: Ball indentation method

DIN EN ISO 2811-1 2016-08  
Paints and varnishes - Determination of density - Part 1: Pycnometer method

DIN EN ISO 11357-3 2018-07  
Plastics - Differential scanning calorimetry (DSC) - Part 3: Determination of temperature and enthalpy of melting and crystallization  
clause 10.1 – Determination of transition temperatures

DIN EN ISO 11357-6 2018-07  
Plastics - Differential scanning calorimetry (DSC) - Part 6: Determination of oxidation induction time (isothermal OIT) and oxidation induction temperature (dynamic OIT)

DIN EN ISO 11358-1 2014-10  
Plastics - Thermogravimetry (TG) of polymers - General principles

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7.1.1 Tensile force and tensile strength testing *

The testing areas for flexible accreditation are characterised by the measured values in the table below.

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<thead>
<tr>
<th>Type of test</th>
<th>Measurand/test parameter</th>
<th>Measurement and test range</th>
<th>Uncertainty of measurement</th>
<th>Testing standard/characteristic method*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tensile strength</td>
<td>Tensile force</td>
<td>1 to 50 kN</td>
<td>2.0 %</td>
<td>DIN 53504</td>
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<tr>
<td>(plastics, elastomers, rubber)</td>
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<td>DIN EN 1979</td>
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<td>ISO 37</td>
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</tbody>
</table>

*lowest achievable uncertainty of measurement

Characteristic testing methods *

- DIN EN ISO 527-1 2012-06: Plastics - Determination of tensile properties - Part 1: General principles
- DIN EN ISO 527-2 2012-06: Plastics - Determination of tensile properties - Part 2: Test conditions for moulding and extrusion plastics
- DIN EN ISO 527-3 2019-02: Plastics - Determination of tensile properties - Part 3: Test conditions for films and sheets
- DIN EN ISO 527-5 2010-01: Plastics - Determination of tensile properties - Part 5: Test conditions for unidirectional fibre-reinforced plastic composites
- DIN EN ISO 13262 2018-01: Thermoplastics piping systems for non-pressure underground drainage and sewerage - Thermoplastics spirally-formed structured-wall pipes - Determination of the tensile strength of a seam

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<tbody>
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<td>ISO 37 2017-11</td>
<td>Rubber, vulcanized or thermoplastic - Determination of tensile stress strain properties</td>
</tr>
<tr>
<td>DIN EN 12310-1 1999-11</td>
<td>Flexible sheets for waterproofing - Part 1: Bitumen sheets for roof waterproofing; determination of resistance to tearing (nail shank)</td>
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<tr>
<td>DIN EN 12310-2 2019-02</td>
<td>Flexible sheets for waterproofing - Determination of resistance to tearing - Part 2: Plastic and rubber sheets for roof waterproofing</td>
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<tr>
<td>DIN EN 12311-1 1999-11</td>
<td>Flexible sheets for waterproofing - Part 1: Bitumen sheets for roof waterproofing; Determination of tensile properties</td>
</tr>
<tr>
<td>DIN EN 12311-2 2013-11</td>
<td>Flexible sheets for waterproofing - Determination of tensile properties - Part 2: Plastic and rubber sheets for roof waterproofing</td>
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<tr>
<td>DIN EN 12316-1 1999-11</td>
<td>Flexible sheets for waterproofing - Part 1: Bitumen sheets for roof waterproofing; determination of peel resistance of joints</td>
</tr>
<tr>
<td>DIN EN 12316-2 2013-08</td>
<td>Flexible sheets for waterproofing - Determination of peel resistance of joints - Part 2: Plastic and rubber sheets for roof waterproofing</td>
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<tr>
<td>DIN EN 12317-1 1999-11</td>
<td>Flexible sheets for waterproofing - Part 1: Bitumen sheets for roof waterproofing; determination of shear resistance of joints</td>
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<tr>
<td>DIN EN 12317-2 2010-12</td>
<td>Flexible sheets for waterproofing - Determination of shear resistance of joints - Part 2: Plastic and rubber sheets for roof waterproofing</td>
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8.2 Characteristics of laminates

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<td>DIN EN 2564 2018-12</td>
<td>Aerospace series - Carbon fibre laminates - Determination of the fibre-, resin- and void contents</td>
</tr>
<tr>
<td>DIN EN ISO 1172 1998-12</td>
<td>Textile-glass-reinforced plastics - Prepregs, moulding compounds and laminates - Determination of the textile-glass and mineral-filler content; calcination methods</td>
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8.3 Fibres for concrete

DIN EN 14889-2 2006-11
Fibres for concrete - Part 2: Polymer fibres - Definitions, specifications and conformity

9. Pipes, manholes and fittings (Le)

9.1 Plastic components and -construction products

DIN 1187 1982-11
Unplasticized polyvinyl chloride (PVC-U) drainpipes; Dimensions, requirements, testing

DIN 4262-1 2009-10
Pipes and fittings for subsoil drainage of trafficked areas and underground engineering - Part 1: Pipes, fittings and their joints made from PVC-U, PP and PE

DIN EN 744 1995-08
Plastics piping and ducting systems - Thermoplastics pipes - Test method for resistance to external blows by the round-the-clock-method

DIN EN 1228 1996-08
Plastics piping systems - Glass-reinforced thermosetting plastics (GRP) pipes - Determination of initial specific ring stiffness

DIN EN 1329-1 2018-05
Plastics piping systems for soil and waste discharge (low and high temperature) within the building structure - Unplasticized poly(vinyl chloride) (PVC-U) - Part 1: Specifications for pipes, fittings and the system

DIN EN 1401-1 2009-07
Plastics piping systems for non-pressure underground drainage and sewerage - Unplasticized poly(vinyl chloride) (PVC-U) - Part 1: Specifications for pipes, fittings and the system

DIN EN 1451-1 2018-10
Plastics piping systems for soil and waste discharge (low and high temperature) within the building structure - Polypropylene (PP) - Part 1: Specifications for pipes, fittings and the system

DIN EN 1453-1 2017-09
Plastics piping systems with structured-wall pipes for soil and waste discharge (low and high temperature) inside buildings - Unplasticized poly(vinyl chloride) (PVC-U) - Part 1: Specifications for pipes and the system

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DIN EN 1519-1 2000-01  
Plastics piping systems for soil and waste discharge (low and high temperature) within the building structure - Polyethylene (PE) - Part 1: Specifications for pipes, fittings and the system

DIN EN 1566-1 1999-12  
Plastics piping systems for soil and waste discharge (low and high temperature) within the building structure - Chlorinated poly(vinyl chloride) (PVC-C) - Part 1: Specifications for pipes, fittings and the system

DIN EN 1852-1 2018-03  
Plastics piping systems for non-pressure underground drainage and sewerage - Polypropylene (PP) - Part 1: Specifications for pipes, fittings and the system

DIN EN 12666-1 2011-11  
Plastics piping systems for non-pressure underground drainage and sewerage - Polypropylene (PP) - Part 1: Specifications for pipes, fittings and the system

DIN EN 13476-2 2018-12  
Plastics piping systems for non-pressure underground drainage and sewerage - Structured-wall piping systems of unplasticized poly(vinyl chloride) (PVC-U), polypropylene (PP) and polyethylene (PE) - Part 2: Specifications for pipes and fittings with smooth internal and external surface and the system, Type A

DIN EN 13476-3 2018-12  
Plastics piping systems for non-pressure underground drainage and sewerage - Structured-wall piping systems of unplasticized poly(vinyl chloride) (PVC-U), polypropylene (PP) and polyethylene (PE) - Part 3: Specifications for pipes and fittings with smooth internal and profiled external surface and the system, Type B

DIN EN 13598-1 2011-02  
Plastics piping systems for non-pressure underground drainage and sewerage - Unplasticized poly(vinyl chloride) (PVC-U), polypropylene (PP) and polyethylene (PE) - Part 1: Specifications for ancillary fittings including shallow inspection chambers

DIN EN 13598-2 2016-09  
Plastics piping systems for non-pressure underground drainage and sewerage - Unplasticized poly(vinyl chloride) (PVC-U), polypropylene (PP) and polyethylene (PE) - Part 2: Specifications for manholes and inspection chambers

DIN EN 14758-1 2012-05  
Plastics piping systems for non-pressure underground drainage and sewerage - Polypropylene with mineral modifiers (PP-MD) - Part 1: Specifications for pipes, fittings and the system

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<tr>
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<tbody>
<tr>
<td>DIN EN 14830 2007-01</td>
<td>Thermoplastics inspection chamber and manhole bases - Test methods for buckling resistance</td>
</tr>
<tr>
<td>DIN EN 14982 2011-01</td>
<td>Plastics piping and ducting systems - Thermoplastics shafts or risers for inspection chambers and manholes - Determination of ring stiffness</td>
</tr>
<tr>
<td>DIN EN ISO 580 2005-05</td>
<td>Plastics piping and ducting systems - Injection-moulded thermoplastics fittings - Methods for visually assessing the effects of heating, clause 4: Method A</td>
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<tr>
<td>DIN EN ISO 2505 2005-08</td>
<td>Thermoplastics pipes - Longitudinal reversion - Test methods and parameters - Test method after Section 5.2: Oven with forced air circulation</td>
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<tr>
<td>DIN EN ISO 3126 2005-05</td>
<td>Plastics piping systems - Plastics components - Determination of dimensions</td>
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<tr>
<td>DIN EN ISO 3127 2018-01</td>
<td>Thermoplastics pipes - Determination of resistance to external blows - Round-the-clock method</td>
</tr>
<tr>
<td>DIN EN ISO 9967 2016-07</td>
<td>Thermoplastics pipes - Determination of creep ratio</td>
</tr>
<tr>
<td>DIN EN ISO 9969 2016-06</td>
<td>Thermoplastics pipes - Determination of ring stiffness</td>
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<tr>
<td>DIN EN ISO 11173 2018-02</td>
<td>Thermoplastics pipes - Determination of resistance to external blows - Staircase method</td>
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<tr>
<td>DIN EN ISO 13255 2018-01</td>
<td>Thermoplastics piping systems for soil and waste discharge inside buildings - Test method for airtightness of joints</td>
</tr>
<tr>
<td>DIN EN ISO 13968 2009-01</td>
<td>Plastics piping and ducting systems - Thermoplastics pipes - Determination of ring flexibility</td>
</tr>
<tr>
<td>ISO 12091 1995-12</td>
<td>Structured-wall thermoplastics pipes - Oven test</td>
</tr>
<tr>
<td>DIN EN ISO 13263 2018-01</td>
<td>Thermoplastics piping systems for non-pressure underground drainage and sewerage - Thermoplastics fittings - Test method for impact strength</td>
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<tbody>
<tr>
<td>DIN EN ISO 13264 2018-01</td>
<td>Thermoplastics piping systems for non-pressure underground drainage and sewerage - Thermoplastics fittings - Test method for mechanical strength or flexibility of fabricated fittings</td>
</tr>
<tr>
<td>ONR 22504-1 2010-08</td>
<td>Internal plastics linings for concrete manhole bases - Part 1: Polypropylene (PP) linings - Requirements, tests, quality control</td>
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<tr>
<td>ONR 22504-2 2010-08</td>
<td>Internal plastics linings for concrete manhole bases - Part 2: Linings made of glass reinforced thermosetting plastics based on polyester resins (GRP) - Requirements, tests, quality control</td>
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<tr>
<td>German Railway Standard DBS 918 064 2013-12</td>
<td>German Railway Standard – Technical delivers conditions, plastics piping and plastics manholes for the drainage of railway systems</td>
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<tr>
<td>PrüFV-5.2-47: Internal test procedure 2017-08-23</td>
<td>Plastic seepage elements for ground laying - testing of short term - load capacity and creep</td>
</tr>
</tbody>
</table>

### 9.2 Construction products made of concrete, reinforced concrete and stoneware

<table>
<thead>
<tr>
<th>Standard</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIN V 1201 2004-08</td>
<td>Concrete pipes and fittings, unreinforced, steel fibre and reinforced for drains and sewers - Type 1 and Type 2 - Requirements, test methods and evaluation of conformity – clause 6</td>
</tr>
<tr>
<td>DIN V 4034-1 2004-08</td>
<td>Prefabricated concrete manholes, unreinforced, steel fibre and reinforced for drains and sewers - Type 1 and Type 2 - Part 1: Requirements, test methods and evaluation of conformity – clause 6 (withdrawn standard)</td>
</tr>
<tr>
<td>DIN 4034-2 2013-05</td>
<td>Prefabricated concrete manholes, unreinforced, steel fibre and reinforced - Part 2: Manholes for well construction and drain construction</td>
</tr>
<tr>
<td>DIN EN 295-1 2013-05</td>
<td>Vitrified clay pipe systems for drains and sewers - Part 1: Requirements for pipes, fittings and joints</td>
</tr>
<tr>
<td>DIN EN 295-3 2012-03</td>
<td>Vitrified clay pipe systems for drains and sewers - Part 3: Test methods</td>
</tr>
</tbody>
</table>

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Abbreviations used: see last page

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DIN EN 295-7 2013-05  Vitrified clay pipe systems for drains and sewers - Part 7: 
Requirements for pipes and joints for pipe jacking

DIN EN 1916 2003-04  Concrete pipes and fittings, unreinforced, steel fibre and 
reinforced, clause 6

DIN EN 1917 2003-04  Concrete manholes and inspection chambers, unreinforced, 
steel fibre and reinforced, clause 6

Quality Guidelines FBS-Qualitätsrichtlinie:1-1 2011-07  Concrete piping and reinforced steel piping and jacking pipes 
with circular cross-section in FBS quality for buried sewage pipes 
and canals – Designs, requirements and testing methods – 
Product testing, clause 6

Quality Guidelines FBS-Qualitätsrichtlinie:1-2 2011-07  Concrete piping and reinforced steel piping with egg-shaped 
cross-section in FBS quality for buried sewage pipes and canals – 
Designs, requirements and testing methods – Product testing; 
clause 6

Quality Guidelines FBS-Qualitätsrichtlinie:2-1 2011-07  Prefabricated shaft components of concrete and reinforced 
concrete in FBS quality for buried sewage pipes and canals – 
Designs, requirements and testing methods – Product testing, 
clause 6

ZP WN 295 2016-01  DIN CERTCO certification programme - 
Glazed vitrified clay piping, pipe fittings and their accessories for 
sewage pipes and canals - DIN EN 295, Parts 1 to 7  
here: 4.9 vertical load for connecting sockets C, 4.16 
measurement of pipes and fittings, 4.17 assembly, function and 
setting of Elastomer-tightness profile for connections

ZP 295 2007-05  DIN CERTCO certification programme – Unglazed, sleeveless 
vitrified clay piping, pipe fittings and their accessories for sewage 
pipes and canals - DIN EN 295, Parts 1 to 7 
here: 5.4.1 diameter and connection dimensions, 
5.6.2 air tightness (special case)

9.3 Pipe joints and elastomer seals

DIN 4060 2016-07  Joints of sewer and drain pipes with elastomeric seals - 
Requirements and testing on joints with elastomeric seals: 
Test method 4.1 Watertightness

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DIN 53505  Testing of rubber - Shore A and Shore D hardness test
2000-08  (*withdrawn standard*)

DIN EN 681-1  Elastomeric seals - Material requirements for pipe joint seals
2006-11  used in water and drainage applications - Part 1: Vulcanized rubber
except clause 4.2.9 – Ozone resistance

DIN EN 681-2  Elastomeric seals - Material requirements for pipe joint seals
2006-11  used in water and drainage applications - Part 2: Thermoplastic elastomers
except clause 4.2.9 – Ozone resistance

DIN ISO 48  Rubber, vulcanized or thermoplastic - Determination of hardness
2016-09  (hardness between 10 IRHD and 100 IRHD)
Method M - microhardness test

DIN ISO 815-1  Rubber, vulcanized or thermoplastic - Determination of
2016-09  compression set - Part 1: At ambient or elevated temperatures

DIN ISO 815-2  Elastomere oder thermoplastische Elastomere - Bestimmung des
2016-09  Druckverformungsrestes - Teil 2: Bei niedrigen Temperaturen

DIN ISO 1817  Rubber, vulcanized - Determination of the effect of liquids
2016-11

DIN ISO 3384-1  Rubber, vulcanized or thermoplastic - Determination of stress
2015-12  relaxation in compression - Part 1: Testing at constant temperature

DIN EN ISO 868  Plastics and ebonite - Determination of indentation hardness by
2003-10  means of a durometer (Shore hardness)
here: Durometer Typ A (Shore hardness A)

DIN ISO 7619-1  Rubber, vulcanized or thermoplastic - Determination of
2012-12  indentation hardness - Part 1: Durometer method (Shore hardness)
Scale A – Elastomere in normal hardness

DIN ISO 7619-2  Rubber, vulcanized or thermoplastic - Determination of
2012-02  indentation hardness - Part 2: IRHD pocket meter method

ISO 9691  Rubber - Recommendations for the workmanship of joint rings -
1992-11  Description and classification of imperfections

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DIN EN ISO 13254
Thermoplastics piping systems for non-pressure applications - Test method for watertightness
2018-01

DIN EN ISO 13257
Thermoplastics piping systems for non-pressure applications - Test method for resistance to elevated temperature cycling
2019-04

DIN EN ISO 13259
Thermoplastics piping systems for underground non-pressure applications - Test method for leaktightness of elastomeric sealing ring type joints
2018-09

9.4 Manhole covers, drainage channels, steps, fixed ladders

DIN 1212-1
Step irons with upstand for staggered manhole steps - Part 1:
2003-05
Step irons to be fitted in masonry or set into concrete
here: clause 3

DIN 1212-2
Step irons with upstand for staggered manhole steps - Part 2:
2003-05
Step irons to be set into prefabricated concrete units
here: clause 3

DIN 1212-3
Step irons with upstand for staggered manhole steps - Part 3:
2010-04
Bolted-on step irons
here: clause 3

DIN 19580
Drainage channels for vehicular and pedestrian areas - Durability, mass per unit area and evaluation of conformity
2010-07

DIN EN 124-1
Gully tops and manhole tops for vehicular and pedestrian areas - Part 1: Definitions, classification, general principles of design, performance requirements and test methods except clause 7.4
2015-09

DIN EN 124-2
Gully tops and manhole tops for vehicular and pedestrian areas - Part 2: Gully tops and manhole tops made of cast iron
2015-09

DIN EN 124-3
Gully tops and manhole tops for vehicular and pedestrian areas - Part 3: Gully tops and manhole tops made of steel or aluminium alloys
2015-09

DIN EN 124-4
Gully tops and manhole tops for vehicular and pedestrian areas - Part 4: Gully tops and manhole tops made of steel reinforced concrete
2015-09

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DIN EN 124-5 2015-09
Gully tops and manhole tops for vehicular and pedestrian areas - Part 5: Gully tops and manhole tops made of composite materials

DIN EN 124-6 2015-09
Gully tops and manhole tops for vehicular and pedestrian areas - Part 6: Gully tops and manhole tops made of polypropylene (PP), polyethylene (PE) or unplasticized poly(vinyl chloride) (PVC-U)

DIN EN 1433 2005-09
Drainage channels for vehicular and pedestrian areas - Classification, design and testing requirements, marking and evaluation of conformity

DIN EN 13101 2003-04
Steps for underground man entry chambers - Requirements, marking, testing and evaluation of conformity

DIN EN 14396 2004-04
Fixed ladders for manholes

10. Flexible sheets for waterproofing, coating material/-systems (Le)

10.1 Plastics, Bitumen sheets, fluid mineral substances to be applied or plastic based materials

DIN EN 1848-1 1999-12
Flexible sheets for waterproofing - Determination of length, width and straightness - Part 1: Bitumen sheets for roof waterproofing

DIN EN 1848-2 2001-09
Flexible sheets for waterproofing - Determination of length, width, straightness and flatness - Part 2: Plastic and rubber sheets for roof waterproofing

DIN EN 1849-1 2000-01
Flexible sheets for waterproofing - Determination of thickness and mass per unit area - Part 1: Bitumen sheets for roof waterproofing

DIN EN 1849-2 2010-04
Flexible sheets for waterproofing - Determination of thickness and mass per unit area - Part 2: Plastic and rubber sheets

DIN EN 1850-1 1999-12
Flexible sheets for roofing - Determination of visible defects - Part 1: Bitumen sheets for roof waterproofing

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DIN EN 1850-2 2001-09
Flexible sheets for waterproofing - Determination of visible defects - Part 2: Plastic and rubber sheets for roof waterproofing

DIN EN 12691 2018-05
Flexible sheets for waterproofing - Bitumen, plastic and rubber sheets for roof waterproofing - Determination of resistance to impact

DIN EN ISO 489 1999-08
Plastics - Determination of the refractive index

10.2 Mineral materials (mineral or plastic-based)

DIN EN 1062-7 2004-08
Paints and varnishes - Coating materials and coating systems for exterior masonry and concrete - Part 7: Determination of crack bridging properties – Method A

10.3 Plastics, coatings, injection materials

DIN 19631 2016-07
Leaching of construction products - Percolation method for the examination of the leaching behaviour of materials injected into the soil

DIN EN 1542 1999-07
Products and systems for the protection and repair of concrete structures - Test methods - Measurement of bond strength by pull-off

DIN EN 1767 1999-09
Products and systems for the protection and repair of concrete structures - Test methods - Infrared analysis

DIN CEN/TS 16637-1; DIN SPEC 18046-1 2018-12
Construction products - Assessment of release of dangerous substances - Part 1: Guidance for the determination of leaching tests and additional testing steps

DIN CEN/TS 16637-2; DIN SPEC 18046-2 2014-11
Construction products - Assessment of release of dangerous substances - Part 2: Horizontal dynamic surface leaching test

Abbreviations used: see last page

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10.4 Watertightness*

The testing areas for flexible accreditation are characterised by the measured values in the table below.

<table>
<thead>
<tr>
<th>Type of test</th>
<th>Measurand/test parameter</th>
<th>Measurement and test range</th>
<th>Uncertainty of measurement</th>
<th>Testing standard/characteristic method*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water-tightness</td>
<td>Watertightness yes/no</td>
<td>1 to 500 kPa</td>
<td>1,01</td>
<td>DIN EN 1928</td>
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<tr>
<td></td>
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<td>DIN EN 13111</td>
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<td>DIN EN 14891 Anhang A.7</td>
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<td>DIN EN 15820</td>
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<td>PG – FBB Teil 1 (10.2012)</td>
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<td>PG – FBB (E) Teil 2 (02.2016)</td>
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<td>PG – ÜBB (02.2016)</td>
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<td>PG – MDS (05.2014)</td>
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<td>PG – AIV-F (05.2014)</td>
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<td>PG – AIV-B (05.2014)</td>
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<td>PG – AIV-P (08.2012)</td>
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<td>PG – FLK (06.2010)</td>
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</tbody>
</table>

**Characteristic testing method** *

- **DIN EN 1928 2000-07**: Flexible sheets for waterproofing - Bitumen, plastic and rubber sheets for roof waterproofing - Determination of watertightness
- **DIN EN 13111 2010-11**: Flexible sheets for waterproofing - Underlays for discontinuous roofing and walls - Determination of resistance to water penetration
- **DIN EN 14891 2017-05**: Liquid-applied water impermeable products for use beneath ceramic tiling bonded with adhesives - Requirements, test methods, evaluation of conformity, classification and designation - Annex A.7: Water impermeability

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<table>
<thead>
<tr>
<th>Standard/Regulation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIN EN 15820</td>
<td>Polymer modified bituminous thick coatings for waterproofing - Determination of watertightness</td>
</tr>
<tr>
<td>PG-FBB Teil 1</td>
<td>Seals for construction joints and dummy joint cross-sections - here: Watertightness of construction joint seals Watertightness of dummy joints Swelling pressure of swellable joint seals Behaviour of joint seals with storage of liquids</td>
</tr>
<tr>
<td>PG-FBB (E) Teil 2</td>
<td>Principles of testing for the issuing of national technical approval certification for joint seals in construction elements of concrete with high water penetration resistance in the area in contact with the soil - Part 2: Seals for expansion joints</td>
</tr>
<tr>
<td>PG – MDS</td>
<td>Principles of testing for the issuing of national technical approval certification for joint seals with mineral-based sealing masses (PG-MDS)</td>
</tr>
<tr>
<td>PG-AIV-B</td>
<td>Principles of testing for the issuing of national technical approval certification for seals in connection with ceramic tiling and floor paving – Part 2: Sheet-type sealing materials (PG-AIV-B)</td>
</tr>
<tr>
<td>PG-AIV-F</td>
<td>Principles of testing for the issuing of national technical approval certification for seals in connection with ceramic tiling and floor paving - Part 1: fluid based sealants (PG-AIV-F)</td>
</tr>
<tr>
<td>PG-AIV-P</td>
<td>Principles of testing for the issuing of national technical approval certification for seals in connection with ceramic tiling and floor paving – Part 3: plate shaped sealants (PG-AIV-P)</td>
</tr>
<tr>
<td>PG – FLK</td>
<td>Principle of testing for granting national technical approval certificates for construction structures sealants with fluid plastic substances</td>
</tr>
</tbody>
</table>

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Abbreviations used: see last page

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11. **Noise protection wall and related fixtures for influencing airborne noise propagation and noise absorbing claddings (Le)**

<table>
<thead>
<tr>
<th>Standard Code</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>DIN EN 1793-1</td>
<td>Road traffic noise reducing devices - Test method for determining the acoustic performance - Part 1: Intrinsic characteristics of sound absorption</td>
</tr>
<tr>
<td>DIN EN 1793-2</td>
<td>Road traffic noise reducing devices - Test method for determining the acoustic performance - Part 2: Intrinsic characteristics of airborne sound insulation under diffuse sound field conditions</td>
</tr>
<tr>
<td>DIN EN 1793-4</td>
<td>Road traffic noise reducing devices - Test method for determining the acoustic performance - Part 4: Intrinsic characteristics - In situ values of sound diffraction</td>
</tr>
<tr>
<td>DIN EN 1736-5</td>
<td>Road traffic noise reducing devices - Test method for determining the acoustic performance - Part 5: Intrinsic characteristics - In situ values of sound reflection under direct sound field conditions</td>
</tr>
<tr>
<td>DIN EN 1793-6</td>
<td>Road traffic noise reducing devices - Test method for determining the acoustic performance - Part 6: Intrinsic characteristics - In-situ values of airborne sound insulation under direct sound field conditions</td>
</tr>
<tr>
<td>DIN EN 1794-1</td>
<td>Road traffic noise reducing devices - Non-acoustic performance - Part 1: Mechanical performance and stability requirements Annexes A to E</td>
</tr>
<tr>
<td>DIN EN 1794-2</td>
<td>Road traffic noise reducing devices - Non-acoustic performance - Part 2: General safety and environmental requirements, Annexes A to F</td>
</tr>
<tr>
<td>DIN EN 1794-3</td>
<td>Road traffic noise reducing devices - Non-acoustic performance - Part 3: Reaction to fire - Burning behaviour of noise reducing devices and classification</td>
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<tr>
<td>DIN EN 14389-1</td>
<td>Road traffic noise reducing devices - Procedures for assessing long term performance - Part 1: Acoustical characteristics</td>
</tr>
<tr>
<td>DIN EN 14389-2</td>
<td>Road traffic noise reducing devices - Procedures for assessing long term performance - Part 2: Non-acoustic characteristics</td>
</tr>
</tbody>
</table>

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**Abbreviations used: see last page**
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<thead>
<tr>
<th>Standard</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>DIN EN 16272-1</td>
<td>Railway applications - Track - Noise barriers and related devices acting on airborne sound propagation - Test method for determining the acoustic performance - Part 1: Intrinsic characteristics - Sound absorption in the laboratory under diffuse sound field conditions</td>
</tr>
<tr>
<td>DIN EN 16272-2</td>
<td>Railway applications - Track - Noise barriers and related devices acting on airborne sound propagation - Test method for determining the acoustic performance - Part 2: Intrinsic characteristics - Airborne sound insulation in the laboratory under diffuse sound field conditions</td>
</tr>
<tr>
<td>DIN EN 16272-4</td>
<td>Railway applications - Track - Noise barriers and related devices acting on airborne sound propagation - Test method for determining the acoustic performance - Part 4: Intrinsic characteristics - In situ values of sound diffraction under direct sound field conditions</td>
</tr>
<tr>
<td>DIN EN 16272-6</td>
<td>Railway applications - Track - Noise barriers and related devices acting on airborne sound propagation - Test method for determining the acoustic performance - Part 6: Intrinsic characteristics - In situ values of airborne sound insulation under direct sound field conditions</td>
</tr>
<tr>
<td>DIN CEN/TS 16272-5</td>
<td>Railway applications - Track - Noise barriers and related devices acting on airborne sound propagation - Test method for determining the acoustic performance - Part 5: Intrinsic characteristics - In situ values of sound reflection under direct sound field conditions</td>
</tr>
<tr>
<td>Guideline of the German Railway 804.5501</td>
<td>Noise protection walls – Acoustical tests / Testing of airborne noise attenuation in noise protection walls</td>
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</table>

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12. Space enclosing components and installations (Le)

- DIN EN 1628 2011-09: Pedestrian doorsets, windows, curtain walling, grilles and shutters - Burglar resistance - Test method for the determination of resistance under static loading
- DIN EN 1629 2011-09: Pedestrian doorsets, windows, curtain walling, grilles and shutters - Burglar resistance - Test method for the determination of resistance under dynamic loading
- DIN EN 1630 2011-09: Pedestrian doorsets, windows, curtain walling, grilles and shutters - Burglar resistance - Test method for the determination of resistance to manual burglary attempts
- DIN EN 60598-1 2015-10: Luminaires - Part 1: General requirements and tests
- VDE 0711-1 2015-10: Clause 8: Protection against electric shock
- DIN EN ISO 13964 2014-08: Suspended ceilings - Requirements and test methods without clause 5.5

13. Hygrothermal behaviour in the wall test rig * (Le)

The testing areas for flexible accreditation are characterised by the measured values in the table below.

<table>
<thead>
<tr>
<th>Type of test</th>
<th>Measurand/test parameter</th>
<th>Measurement and test range</th>
<th>Uncertainty of measurement</th>
<th>Testing standard/characteristic method*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Climate change test</td>
<td>Heat-rain cycles</td>
<td>-20°C to +70°C</td>
<td>± 5K</td>
<td>DIN EN 12467</td>
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<tr>
<td>(hygrothermal behaviour in the wall test rig)</td>
<td>Heat-cold cycles</td>
<td>10-95% rel.LF 1 l/m²</td>
<td>± 10 %</td>
<td>ETAG 004 clause 5.1.3.2</td>
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<td>ETAG 034-1 clause 5.4.6</td>
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</tbody>
</table>

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Characteristic testing methods *

DIN EN 12467 2018-07
Fibre-cement flat sheets - Product specification and test methods
clause 7.4.2 – Heat-rain

ETAG 004 2011-08
Guideline for European Technical Approval of external thermal insulation composite systems (ETICS) with rendering
clause 5.1.3.2 - Hygrothermal behaviour of ETICS

ETAG 034-1 2012-04
Guideline for European Technical Approval of kits for external wall claddings – Part 1: Ventilated cladding kits comprising cladding components and associated fixings
clause 5.4.6 Hygrothermal behaviour of VHF

14. Sound insulation of construction products, constructional elements and builds (Le)

14.1 Determination of airborne and impact sound insulation and reduction in constructional elements

DIN EN ISO 10140-2 2010-12
Acoustics - Laboratory measurement of sound insulation of building elements - Part 2: Measurement of airborne sound insulation

DIN EN ISO 10140-4 2010-12
Acoustics - Laboratory measurement of sound insulation of building elements - Part 4: Measurement procedures and requirements

14.2 Determination of dynamic stiffness

DIN EN 29052-1 1992-08
Acoustics; determination of dynamic stiffness; part 1: materials used under floating floors in dwellings

14.3 Determination of flow resistance

DIN EN 29053 1993-05
Acoustics; materials for acoustical applications; determination of airflow resistance

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15. Emissions and immissions of noise and vibrations – module Immission control (Le)

15.1 Determination of noise (group V)

Specifications by module Immission control and DIN 45688:2014

<table>
<thead>
<tr>
<th>Group V: Determination of noise</th>
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<tbody>
<tr>
<td>Title</td>
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<tr>
<td>Technical Instruction - Noise</td>
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<td>Technical Instruction - Noise</td>
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<tr>
<td>16. BImSchV vom 12.06.1990 (BGBl. I S. 1036)</td>
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<tr>
<td>18. BImSchV vom 18.07.1991 (BGBl. I S. 1790)</td>
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<tr>
<td>AVwV Construction Noise 1970-08</td>
</tr>
<tr>
<td>Acoustik 04 1990</td>
</tr>
<tr>
<td>LAI Leisure Activity Noise Guidelines 1995</td>
</tr>
</tbody>
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The methods described correspond to the requirements of the “special proof of competence in the area of immission control” (module Immission control):2011-09 and DIN 45688:2014-07. Competence in the testing and technical task areas of Group V Determination of Noise subject to immission control legislation is hereby confirmed.

The persons named below are entitled to sign for all test types and methods described:
Mr. Dipl.-Ing. Volker Fenske; Mr. Dipl.-Phys. Dietmar Sprinz

15.2 Determination of vibrations (Group VI)

Specifications by module Immission control and DIN 45688:2014

<table>
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<td>Title</td>
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<tr>
<td>LAI- Vibration Guidelines 2000</td>
<td>Considerations for the measurement, evaluation and reduction of vibration immissions (LAI-Erschütterungs-LL)</td>
<td>QMH II Laboratory vol. 2.1</td>
<td>Le</td>
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<tr>
<td>DIN 4150-2 1999-06</td>
<td>Vibrations in buildings - Part 2: Effects on persons in buildings</td>
<td>QMH II Laboratory vol. 2.1 PrüfV-2.1.-2</td>
<td>Le</td>
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<tr>
<td>DIN 4150-3 1999-02</td>
<td>Vibrations in buildings - Part 3: Effects on structures</td>
<td>QMH II Laboratory vol. 2.1 PrüfV-2.1.-2</td>
<td>Le</td>
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</table>

The persons named below are entitled to sign for all test types and methods described:
Head: Mr. Dipl.-Ing Holger Busch
Deputies: Mrs. Prof. Dr.-Ing. Elke Reuschel, Mr. Dipl.-Ing. (FH) Immanuel Wojan

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16. Fire behaviour of building materials, building components, construction products and builds (La)

16.1 Fire behaviour of building components, builds and construction products - national

<table>
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<th>Standard</th>
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<td>DIN 4102-2</td>
<td>Fire behaviour of building materials and building components; building components; definitions, requirements and tests</td>
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<td>1977-09</td>
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<td>DIN 4102-3</td>
<td>Fire behaviour of building materials and building components; fire walls and non-load-bearing external walls; definitions, requirements and tests</td>
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<td>Fire behaviour of building materials and building components - Part 12: Circuit integrity maintenance of electric cable systems; requirements and testing</td>
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16.2 Fire behaviour of building components, builds and construction products - European

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<th>Standard</th>
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<tr>
<td>DIN EN 1363-1</td>
<td>Fire resistance tests - Part 1: General Requirements</td>
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<td>DIN EN 1363-2</td>
<td>Fire resistance tests - Part 2: Alternative and additional procedures</td>
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<td>DIN V EN V 1363-3</td>
<td>Fire resistance tests - Part 3: Verification of furnace performance</td>
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-Translation-

Abbreviations used: see last page

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

<table>
<thead>
<tr>
<th>Decision / resolution of the Commission</th>
<th>System 1)</th>
<th>Technical specification</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<td>Gypsum plasterboards - Definitions, requirements and test methods</td>
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<td>Jointing materials for gypsum boards - Definitions, requirements and test methods</td>
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<td>Gypsum board products from reprocessing - Definitions, requirements and test methods</td>
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<td>Road traffic noise reducing devices - Specifications</td>
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<td>Wood-based panels for use in construction - Characteristics, evaluation of conformity and marking</td>
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<td>Drainage channels for vehicular and pedestrian areas - Classification, design and testing requirements, marking and evaluation of conformity</td>
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Abbreviations used: see last page

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<th>Technical specification</th>
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<td>Roof coverings, rooflights, roof windows and ancillary products</td>
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<td>Self-supporting double skin metal faced insulating panels - Factory made products – Specifications</td>
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<td>Light transmitting flat multiwall polycarbonate (PC) sheets for internal and external use in roofs, walls and ceilings - Requirements and test methods</td>
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<td>Internal and external wall and ceiling finishes</td>
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<td>Fibre-cement flat sheets - Product specification and test methods</td>
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<td>Suspended ceilings - Requirements and test methods</td>
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<td>Stretched ceilings - Requirements and tests methods</td>
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<td>Flexible sheets for waterproofing - Plastic and rubber damp proof courses - Definitions and characteristics</td>
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### Technical Specifications

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<td>Polymer modified bituminous thick coatings for waterproofing - Definitions and requirements</td>
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<td><strong>EN 13166:2012+A2:2016</strong> Thermal insulation products for buildings - Factory made phenolic foam (PF) products – Specification</td>
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<td><strong>EN 13170:2012+A1:2015</strong> Thermal insulation products for buildings - Factory made products of expanded cork (ICB) - Specification</td>
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<td><strong>EAD 040005-00-1201</strong> Factory-made thermal and/or acoustic insulation products made of vegetable or animal fibres</td>
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### Decision / resolution of the Commission

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<tr>
<th>Date</th>
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<td>EAD 040012-00-1201 Thermal insulation board made of mineral material</td>
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<td>EAD 350142-00-1106 Fire protective board, slab and mat products and kits</td>
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<td>EAD 040049-00-0502 Polyurethane (PU)-exhibition mat for impact sound insulation</td>
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1) System of assessment and verification of consistency of performance
2) Harmonization in preparation

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

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

18. Tests of reaction to fire, of resistance to fire, of external fire performance and of noise absorption, for which the reference to a relevant harmonised technical specification is not required (point 3. Annex V, (EU) Nr. 305/2011) - (Le,La)

18.1 Reaction to fire - (La)

- EN 13823 2010+A1:2014 Reaction to fire tests for building products - Building products excluding floorings exposed to the thermal attack by a single burning item
- EN ISO 1182 2010 Reaction to fire tests for products - Non-combustibility test

Abbreviations used: see last page

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EN ISO 1716 2018
Reaction to fire tests for products - Determination of the gross heat of combustion (calorific value)

EN ISO 11925-2 2010
Reaction to fire tests - Ignitability of products subjected to direct impingement of flame - Part 2: Single-flame source test

in conjunction with:
EN 13501-1 2007
Fire classification of construction products and building elements - Part 1: Classification using data from reaction to fire tests
+A1 2009

EN 13501-6 2014
Fire classification of construction products and building elements - Part 6: Classification using data from reaction to fire tests on electric cable

18.2 Resistance to fire - (La)

EN 1364-1 2015
Fire resistance tests for non-loadbearing elements - Part 1: Walls

EN 1364-2 2018
Fire resistance tests on non-loadbearing elements - Part 2: Ceilings

EN 1365-2 2014
Fire resistance tests for loadbearing elements - Part 2: Floors and roofs

EN 1365-3 1999
Fire resistance tests for loadbearing elements - Part 3: Beams

EN 1365-4 1999
Fire resistance tests on loadbearing elements - Part 4: Columns

EN 1366-3 2009
Fire resistance tests for service installations - Part 3: Penetration seals

EN 1366-4 2006 + A1:2010
Fire resistance tests for service installations - Part 4: Linear joint seals

EN 1366-5 2010
Fire resistance tests for service installations - Part 5: Service ducts and shafts

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18.3 External fire performance – (La)

CEN/TS 1187 Test methods for external fire exposure to roofs
2012

in conjunction with

EN 13501-5 Fire classification of construction products
2016 and building elements - Part 5: Classification

using data from external fire exposure to
roofs tests

18.4 Noise absorption – (Le)

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

EN ISO 10140-1 Acoustics - Laboratory measurement of sound insulation of
2016 building elements - Part 1: Application rules for specific products

EN ISO 10140-3 Acoustics - Laboratory measurement of sound insulation of
2010 building elements - Part 3: Measurement of impact sound
insulation

The requirements for a testing laboratory in accordance with Article 43 of the Construction Product are
fulfilled.
Annex to the Accreditation Certificate D-PL-11021-01-00

Abbreviations used:

BAW  Bundesanstalt für Wasserbau (German Federal Waterways Engineering and Research Institute)
DAfStb  Deutscher Ausschuss für Stahlbeton (German Committee for Reinforced Concrete)
DBS  Standard of Deutsche Bahn AG
DBV  Deutscher Beton- und Bautechnik-Verein (German Concrete and Construction Technology Association)
EAD  European Assessment Document
ETAG  European Technical Approval Guideline
FBS  Fachvereinigung Betonrohre und Stahlbetonrohre e.V. (German Professional Association for Concrete Piping and Reinforced Steel Piping)
ONR  Normative documents of the Austrian Standards Institute
ÖVBB  Österreichische Vereinigung für Beton und Bautechnik (Austrian Association for Concrete and Engineering Construction)
PG-FBB  DIBt - Prüfgrundsätze - Fugenabdichtungen in Bauteilen aus Beton (FBB) mit hohem Wassereindringwiderstand gegen drückendes und nicht drückendes Wasser und gegen Bodenfeuchtigkeit (Testing principles – Construction joint seals in constructional elements of concrete with high water penetration resistance against water under pressure and in-situ water and against soil moisture)
PG-ÜBB  DIBt - Prüfgrundsätze für Bauwerksabdichtungen im Übergang auf Bauteile aus Beton (ÜBB) mit hohem Wassereindringwiderstand (Testing principles for seals in constructions in the transition from constructional elements to concrete with high water penetration resistance)
Prüf-XX-XX_VA  Internal test procedure

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