

Certificate D-PL-11118-01-01 valid from 12.12.2024

- Tests in the areas of:**
- a) Physical-chemical and chemical testing of synthetic and fiber materials, varnishes, paints, metal products as well as wood and leather; Determination of elements in electro technical products
 - b) Thermal analysis of polymeric materials
 - c) mechanical-technological, physical-chemical and chemical tests as well as color fastness tests on fibers, threads, fabrics and plastics
 - d) processing, mechanical, thermal and electrical tests on plastics
 - e) biological tests for biocompatibility and antibacterial efficacy of plastics, textiles and other materials

- Flexibility category:**
- none Test areas without a star marking are not flexibly accredited.
 - A = *** Within the accreditation areas marked with (A), the testing laboratory is permitted to use the standardized test methods listed here or equivalent methods with different edition numbers without the need for prior notification and approval by DAkkS
 - B = * Within the accreditation areas marked with (B), the testing laboratory is permitted to freely select standardized or equivalent test methods without the need for prior notification and approval by DAkkS
The test procedures listed in the appendix to the accreditation certificate are examples.
 - C = ** Within the accreditation areas marked with (C), the testing laboratory is permitted to modify, further develop, and develop new test methods within a defined test area without the need for prior notification and approval by DAkkS. The test methods listed in the accreditation certificate appendix are examples.

Certificate D-PL-11118-01-02 valid from 16.04.2025

- Tests in the areas of:** Medical devices
- Test areas / test objects:** biological and microbiological-hygienic testing of medical devices
- Flexibility category:** none

Current list of all testing procedures in the flexible accreditation area:

Note: Versions written in italics are no longer or not yet included in the official DAkKS certificate, but can still be offered as an accredited procedure within the framework of flexibility.

1 Physical-chemical and chemical testing of consumer goods and toys as well as polymer materials

1.1 Sample preparation (A)

DIN EN 71-10	2006-03	Safety of toys - Part 10: Organic chemical compounds - Sample preparation and extraction
DIN EN 645	1994-01	Paper and board intended to come into contact with foodstuffs; preparation of a cold water extract
DIN EN 647	1994-01	Paper and board intended to come into contact with foodstuffs; preparation of a hot water extract
DIN EN 1811	2023-04	Reference test method for release of nickel from all post assemblies which are inserted into pierced parts of the human body and articles intended to come into direct and prolonged contact with the skin
DIN EN 50642	2023-08	Cable management systems - Test method for content of halogens
HV_250_002	2020-09	Performing microwave pressure digestion

1.2 Determination of organic substances and substance groups using high-performance liquid chromatography (HPLC) with standard detectors (DAD detector, FLD detector) **

BfR – Empfehlung XXI/1.	2024-09	Determination of releasable formaldehyde in rubber consumer goods <i>(modification: derivatization with DNPH and determination with HPLC-DAD)</i>
DIN EN 71-11	2006-01	Safety of toys - Part 11: Organic chemical compounds - Methods of analysis
DIN EN 717-3	1996-05	Wood-based panels - Determination of formaldehyde release - Part 3: Formaldehyde release by the flask method <i>(Modification: Derivatization with DNPH and determination with HPLC)</i>
DIN EN 1541	2001-07	Paper and board intended to come into contact with foodstuffs - Determination of formaldehyde in an aqueous extract <i>(Modification: Derivatization with DNPH and determination with HPLC-DAD)</i>
DIN EN 14362-1	2017-05	Textiles - Methods for determination of certain aromatic amines derived from azo colorants - Part 1: Detection of the use of certain azo colorants accessible with and without extracting the fibres
DIN EN 14362-3	2017-05	Textiles - Methods for determination of certain aromatic amines derived from azo colorants - Part 3: Detection of the use of certain azo colorants, which may release 4-aminoazobenzene
DIN EN ISO 17226-1	2021-05	Leather - Chemical determination of formaldehyde content - Part 1: Method using high-performance liquid chromatography
DIN EN ISO 17226-3	2011-09	Leather - Chemical determination of formaldehyde content - Part 3: Determination of formaldehyde emissions from leather
DIN EN ISO 17234-1	2020-12	Leather - Chemical tests for the determination of certain azo colourants in dyed leathers - Part 1: Determination of certain aromatic amines derived from azo colourants
DIN EN ISO 17234-2	2011-06	Leather - Chemical tests for the determination of certain azo colorants in dyed leathers - Part 2: Determination of 4-aminoazobenzene
DIN ISO 12219-3	2013-12	Interior air of road vehicles - Part 3: Screening method for the determination of the emissions of volatile organic compounds from vehicle interior parts and materials - Micro-scale chamber method <i>(Modification: Determination of carbonyl compounds after adsorption on DNPH cartridges and determination with HPLC-DNPH after extraction)</i>
HV_250_008	2021-08	Determination of the caprolactam and cyclic oligomer content in polyamide 6 using HPLC
HV_250_009	2021-08	Determination of acetaldehyde in PES samples using HPLC
HV_250_010	2023-07	Determination of primary aromatic amines in aqueous extract
VDA 275	2025-07	Molded parts for vehicle interiors - Determination of formaldehyde emissions - Measurement method according to the modified bottle method <i>(Modification: Derivatization with DNPH and determination with HPLC)</i>

Excluded from flexible accreditation:

BMW AA-0061	2018-09	Determination of the emission of formaldehyde from non-metallic materials and components using HPLC
FLTM BZ 156-01	2011-07	Determination of Formaldehyde, Aldehyde and Ketone emissions from non-metallic components, parts and materials in the vehicle interior
GM / Opel GMW 15635	2021-12	Determination of aldehyde and ketone emissions from interior materials
STD 429-0002	2005-01	Determination of formaldehyde emission from components in vehicle interiors <i>(Modification: Derivatization with DNPH and determination with HPLC)</i>
VCS 1027, 2739	2004-03	Determination of Formaldehyde Emission from components in vehicle interiors <i>(Modification: Derivatization with DNPH and determination with HPLC)</i>
VW PV 3925	2021-01	Polymer materials – Measurement of formaldehyde emissions <i>(Modification: deviating derivatization with DNPH)</i>

1.3 Determination of organic substances and substance groups using high-performance liquid chromatography (HPLC) with mass-selective detectors (MS) **

DIN EN ISO 18254-1	2016-09	Textiles - Method for the detection and determination of alkylphenol ethoxylates (APEO) - Part 1: Method using HPLC-MS
DIN EN ISO 21084	2019-06	Textiles - Method for determination of alkylphenols (AP)
HV_250_001	2025-08	Determination of the content of various bisphenols in plastics
HV_250_011	2025-08	Determination of isothiazolinones by LC-MS after extraction

1.4 Determination of organic substances and substance groups using gas chromatography (GC) with standard detectors (FID Detector) **

HV_250_003	2025-09	Determination of monomers and additives in polyester
VDA 277	1995-01 (withdrawn)	Non-metallic materials of vehicle interior - Determination of emission of organic compounds

Excluded from flexible accreditation:

FLTM BZ 157-01	2011-03	Determination of organic emissions from nonmetallic materials in vehicle interiors by Headspace Gas Chromatography
VCS 1027, 2749	2004-05	Determination of organic emissions from nonmetallic materials in vehicle interiors
VW PV 3341	1995-03	Non-Metallic Materials in Automotive Interior Trim - Determination of emission of organic compounds

1.5 Determination of organic substances and substance groups using gas chromatography with mass spectrometry (GC-MS) **

AfPS GS 2019:01	2019-05	Determination of polycyclic aromatic hydrocarbons (PAHs) in polymers and textiles <i>(Restriction: no examination or evaluation of the GS mark here)</i>
CPSC-CH-C1001-09.4	2018-01	Standard Operation Procedure for Determination of Phthalates <i>(Modification: Extraction with dichloromethane)</i>
DIN EN 71-3	2025-02	Safety of toys - Part 3: Migration of certain elements
DIN EN 71-11	2006-01	Safety of toys - Part 11: Organic chemical compounds - Methods of analysis
DIN EN 71-15	2025-05	Safety of toys - Part 15: Formamide in foam toy materials
DIN EN 13130-3	2004-08	Materials and articles in contact with foodstuffs - Plastics substances subject to limitation - Part 3: Determination of acrylonitrile in food and food simulants
DIN EN 13130-4	2004-08	Materials and articles in contact with foodstuffs - Plastics substances subject to limitation - Part 4: Determination of 1,3-butadiene in plastics
DIN EN 14362-1	2017-05	Textiles - Methods for determination of certain aromatic amines derived from azo colorants - Part 1: Detection of the use of certain azo colorants accessible with and without extracting the fibres
DIN EN 14362-3	2017-05	Textiles - Methods for determination of certain aromatic amines derived from azo colorants - Part 3: Detection of the use of certain azo colorants, which may release 4-aminoazobenzene
DIN EN 16453	2014-06	Pulp, paper and paperboard - Determination of phthalates in extracts from paper and paperboard
DIN EN 16778	2016-10	Protective gloves - The determination of Dimethylformamide in gloves
DIN EN 17130	2019-09	Textiles and textile products - Determination of Dimethylfumarate (DMFu), Method using gas chromatography
DIN EN 17132	2019-09	Textiles and textile products - Determination of Polycyclic Aromatic Hydrocarbons (PAH), Method using gas chromatography
DIN EN 17137	2025-01	Textiles and textile products - Determination of the content of compounds based on chlorobenzenes and chlorotoluenes
DIN EN 17131-1	2026-02	Textiles and textile products - Determination of certain residual solvents - Part 1: Determination of aprotic solvents, method using gas chromatography
DIN EN 62321-6 (VDE 0042-1-6)	2016-05	Determination of certain substances in electrotechnical products - Part 6: Polybrominated biphenyls and polybrominated diphenyl ethers in polymers by gas chromatography-mass spectrometry (GC-MS) <i>(Modification: Ultrasonic extraction, application to textiles and plastics and to other analytes)</i>
DIN EN ISO 16186	2021-09	Footwear - Critical substances potentially present in footwear and footwear components – Test method for the quantitative determination of dimethyl fumarate (DMFu) in footwear materials
DIN EN ISO 16189	2022-03	Footwear - Critical substances potentially present in footwear and footwear components - Test method to quantitatively determine dimethylformamide in footwear materials
DIN EN ISO 16190	2022-02	Footwear - Critical substances potentially present in footwear and footwear components - Test method to quantitatively determine polycyclic aromatic hydrocarbons (PAHs) in footwear materials
DIN EN ISO 17070	2015-05	Leather - Chemical tests - Determination of tetrachlorophenol-, trichlorophenol-, dichlorophenol-, monochlorophenol-isomers and pentachlorophenol content <i>(Modification: Extraction with K2CO3 solution)</i>
DIN EN ISO 17234-1	2020-12	Leather - Chemical tests for the determination of certain azo colourants in dyed leathers - Part 1: Determination of certain aromatic amines derived from azo colourants
DIN EN ISO 17234-2	2011-06	Leather - Chemical tests for the determination of certain azo colorants in dyed leathers - Part 2: Determination of 4-aminoazobenzene

DIN ISO 12219-3	2013-12	Interior air of road vehicles - Part 3: Screening method for the determination of the emissions of volatile organic compounds from vehicle interior parts and materials - Micro-scale chamber method
FLTM BZ 157-01	2011-03	Determination of organic emissions from nonmetallic materials in vehicle interiors by Headspace Gas Chromatography
HV_250_005	2025-11	Determination of formamide, acetophenone and 2-phenyl-2-propanol in textile materials and plastics using GC/MS
HV_250_006	2026-05	Determination of phthalates and other plasticizers in textile materials and plastics
HV_250_007	2025-08	Determination of selected organotin compounds in textiles and plastics
VDA 277	1995-01	Nichtmetallische Werkstoffe der Kfz-Innenausstattung – Bestimmung der Emission organischer Verbindungen
VDA 278	2016-05	Thermal Desorption Analysis of Organic Emissions for the Characterization of Non-Metallic Materials for Automobiles
VW PV 3341	1995-03	Non-Metallic Materials in Automotive Interior Trim - Determination of emission of organic compounds

Excluded from flexible accreditation:

VCS 1027, 2759	2006-06	Quantification of specific volatile organic substances from non-metallic materials in vehicle interiors
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1.6 Determination of elements using inductively coupled plasma atomic emission spectrometry (ICP-OES) **

ASTM F963	2023	Standard Consumer Safety Specification for Toy Safety- Test Methods for Determination of Heavy Element Content in toys, Toy Components, and Materials
CPSC-CH-E1001-08.3	2012-11	Standard Operation Procedure for the Determining Total Lead (Pb) in Children's Metal Products (including Children's Metal Jewellery)
CPSC-CH-E1003-09.1	2011-02	Standard Operation Procedure for the Determining Lead (Pb) in Paint and Other Similar Surface Coatings
DIN EN 71-3	2025-02	Safety of toys - Part 3: Migration of certain elements
DIN EN 1811	2023-04	Reference test method for release of nickel from all post assemblies which are inserted into pierced parts of the human body and articles intended to come into direct and prolonged contact with the skin
DIN EN 16711-1	2016-02	Textiles - Determination of metal content - Part 1: Determination of metals using microwave digestion
DIN EN 16711-2	2016-02	Textiles - Determination of metal content - Part 2: Determination of metals extracted by acidic artificial perspiration solution
DIN EN ISO 11885 (E 22)	2009-09	Water quality - Determination of selected elements by inductively coupled plasma optical emission spectrometry (ICP-OES) <i>(Modification: here for dissolving polymers, textiles, leather, paper and cardboard)</i>
DIN EN ISO 17072-1	2019-07	Leather - Chemical determination of metal content - Part 1: Extractable metals
DIN EN ISO 17072-2	2022-12	Leather Chemical determination of metal content - Part 2: total metal content

1.7 Determination of elements using inductively coupled plasma mass spectrometry (ICP-MS) (B)

ASTM F963	2023	Standard Consumer Safety Specification for Toy Safety - Test Methods for Determination of Heavy Element Content in toys, Toy Components, and Materials
DIN EN 71-3	2025-02	Safety of toys - Part 3: Migration of certain elements
DIN EN 16711-1	2016-02	Textiles - Determination of metal content - Part 1: Determination of metals using microwave digestion
DIN EN ISO 17294-2	2017-01	Water quality - Application of inductively coupled plasma mass spectrometry (ICP-MS) - Part 2: Determination of selected elements including uranium isotopes <i>(Modification: here for dissolving polymers, textiles, leather, paper and cardboard)</i>

1.8 Determination of elements in textiles and leather using atomic absorption spectrometry (graphite tube and flame AAS) (B)

DIN EN 16711-2	2016-02	Textiles - Determination of metal content - Part 2: Determination of metals extracted by acidic artificial perspiration solution
DIN EN ISO 12846	2012-08	Water quality - Determination of mercury - Method using atomic absorption spectrometry (AAS) with and without enrichment (ISO 12846:2012) <i>(Modification: here for dissolving polymers, textiles, leather, paper, and cardboard)</i>
DIN EN ISO 15586	2004-02	Water quality - Determination of trace elements using atomic absorption spectrometry with graphite furnace <i>(Modification: here for dissolving polymers, textiles, leather, paper and cardboard)</i>
DIN EN ISO 17072-1	2019-07	Leather - Chemical determination of metal content - Part 1: Extractable metals

1.9 Photometric methods (A)

DIN EN ISO 14184-1	2011-12	Textiles - Determination of formaldehyde - Part 1: Free and hydrolysed formaldehyde (Water extraction procedure)
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1.10 Ion chromatography (A)

DIN EN 71-3	2025-02	Safety of toys - Part 3: Migration of certain elements
DIN EN ISO 10304-1 (D 20)	2009-07	Water quality - Determination of dissolved anions by liquid chromatography of ions - Part 1: Determination of bromide, chloride, fluoride, nitrate, nitrite, phosphate and sulfate (Modification: digestion solutions from O2 digestion of polymers, textiles, leather, paper, and cardboard)

1.11 Other procedures (A)

DIN EN ISO 3071	2020-05	Textiles - Determination of pH of aqueous extract
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2 Determination of elements and substances in electrotechnical products (A)

DIN EN 62321-3-1 VDE 0042-1-3-1	2014-10	Determination of certain substances in electrotechnical products - Part 3-1: Screening - Lead, mercury, cadmium, total chromium and total bromine by X-ray fluorescence spectrometry
DIN EN 62321-4 VDE 0042-1-4	2018-05	Determination of certain substances in electrotechnical products - Part 4: Mercury in polymers, metals and electronics by CV-AAS, CV-AFS, ICP-OES and ICP-MS
DIN EN 62321-5 VDE 0042-1-5	2014-10	Determination of certain substances in electrotechnical products - Part 5: Cadmium, lead and chromium in polymers and electronics and cadmium and lead in metals by AAS, AFS, ICP-OES and ICP-MS
DIN EN 62321-6 (VDE 0042-1-6)	2016-05	Determination of certain substances in electrotechnical products - Part 6: Polybrominated biphenyls and polybrominated diphenyl ethers in polymers by gas chromatography-mass spectrometry (GC-MS)

3 Thermal analysis of polymeric materials (A)

DIN 51007-1	2024-08	Thermal analysis (TA) - Differential thermal analysis (DTA) and differential scanning calorimetry (DSC) - Part 1: General Principles
DIN EN 728	1997-03	Plastics piping and ducting systems - Polyolefin pipes and fittings - Determination of oxidation induction time (withdrawn standard)
DIN EN ISO 11357-1	2023-06	Plastics - Differential scanning calorimetry (DSC) - Part 1: General principles
DIN EN ISO 11357-2	2020-08	Plastics - Differential scanning calorimetry (DSC) - Part 2: Determination of glass transition temperature and step height
DIN EN ISO 11357-3	2025-09	Plastics - Differential scanning calorimetry (DSC) - Part 3: Determination of temperature and enthalpy of melting and crystallization
DIN EN ISO 11357-6	2025-09	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	2022-07	Plastics - Thermogravimetry (TG) of polymers - Part 1: General principles
VW PV 3927	2022-04	Thermogravimetry for plastics and elastomers – Determination: Plasticizers, carbon black

4 Mechanical-technical testing of textiles

4.1 Mechanical-technical testing of fibre materials (A)

DIN 53808-1	2003-01	Testing of textiles - Determination of length of fibres by measuring of individual fibres
DIN 53843-2	1988-03	Testing of textiles; loop tensile test for staple fibres
DIN EN ISO 1973	2021-12	Textiles - Determination of linear density - Gravimetric method and vibroscope method
	1995-12	
DIN EN ISO 5079	2021-02	Textiles - Fibres - Determination of breaking force and elongation at break of individual fibres
	1996-02	

4.2 Mechanical-technical testing of single and plied yarns (A)

DIN 53830-3	1981-05	Testing of textiles; determination of linear density of single and plied yarns; simple yarns and plied yarns, textured yarns, short length method
DIN 53830-4	1981-05	Testing of textiles; determination of linear density of single and plied yarns; elasto-yarns including core spun yarns from elastofibres; short length method
DIN 53834-2	1979-01	Testing of textiles; Simple tensile test for single and plied yarns in oven-dry state (withdrawn standard)
DIN 53835-1	1987-01	Testing of textiles; tensile test for testing the elastic behaviour; principles
DIN 53835-2	1981-08	Testing of textiles; determination of the elastic behaviour of single and plied elastomeric yarns by repeated application of tensile load between constant extension limits
	2024-05	
DIN 53835-3	1981-08	Testing of textiles; determination of the elastic behaviour of single and plied yarns by a single application of tensile load between constant extension limits
DIN 53835-4	1981-08	Testing of textiles; determination of the elastic behaviour of single and plied yarns by a single application of tensile load between constant force limits
DIN 53842-1	1976-04	Testing of textiles; knot tensile test for single and plied yarns
DIN 53843-1	1992-11	Testing of textiles; loop tensile test; yarns
DIN EN ISO 2060	1995-04	Textiles - Yarn from packages - Determination of linear density (mass per unit length) by the skein method
DIN EN ISO 2061	2015-12	Textiles - Determination of twist in yarns - Direct counting method

DIN EN ISO 2062	2010-04	Textiles - Yarns from packages - Determination of single-end breaking force and elongation at break using constant rate of extension (CRE) tester
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4.3 Geometric testing of textile fabrics (fabrics, nonwovens, knits, coated fabrics) (B)

<i>DIN ISO 4593</i>	<i>2019-06</i>	<i>Plastics - Film and sheeting - Determination of thickness by mechanical scanning</i>
DIN EN ISO 2286-3	2017-01	Rubber- or plastics-coated fabrics - Determination of roll characteristics - Part 3: Method for determination of thickness
<i>DIN EN ISO 2589</i>	<i>2016-07</i>	<i>Leather - Physical and mechanical tests - Determination of thickness</i>
DIN EN ISO 5084	1996-10	Textiles - Determination of thickness of textiles and textile products
DIN EN ISO 9073-2	1997-02	Textiles - Test methods for nonwovens - Part 2: Determination of thickness

4.4 Mechanical-technical testing of textile fabrics (fabrics, nonwovens, knits, coated fabrics) (A)

DIN 53362	2003-10 2024-11	Testing of plastics films and textile fabrics (excluding nonwovens), coated or not coated fabrics - Determination of stiffness in bending - Method according to Cantilever
DIN 53363	2003-10	Testing of plastic films - Tear test using trapezoidal test specimen with incision
DIN EN 1049-2	1994-02	Textiles; woven fabrics; construction; methods of analysis; Part 2: determination of number of threads per unit length
DIN EN 12127	1997-12	Textiles - Fabrics - Determination of mass per unit area using small samples
<i>DIN EN 17679</i>	<i>2022-08</i>	<i>Plastics - Plastic films - Determination of tear resistance using a trapezoidal test specimen with incision</i>
DIN EN 29073-3	1992-08	Textiles; test method for nonwovens; Part 3: determination of tensile strength and elongation
DIN EN ISO 1421	2017-03	Rubber- or plastics-coated fabrics - Determination of tensile strength and elongation at break
DIN EN ISO 2286-2	2017-01	Rubber- or plastics-coated fabrics - Determination of roll characteristics - Part 2: Methods for determination of total mass per unit area, mass per unit area of coating and mass per unit area of substrate
DIN EN ISO 3376	2020-08	Leather - Physical and mechanical tests - Determination of tensile strength and percentage elongation
DIN EN ISO 3759	2011-08	Textiles - Preparation, marking and measuring of fabric specimens and garments in tests for determination of dimensional change
<i>DIN EN ISO 4674-1</i>	<i>2017-03</i>	<i>Rubber- or plastics-coated fabrics - Determination of tear resistance - Part 1: Constant rate of tear methods</i>
<i>DIN EN ISO 9073-3</i>	<i>2023-09</i>	<i>Nonwovens - Test methods - Part 3: Determination of tensile strength and elongation at break using the strip method</i>
DIN EN ISO 9073-4	1997-09 2021-05	Textiles - Test methods for nonwovens - Part 4: Determination of tear resistance
DIN EN ISO 9237	1995-12	Textiles - Determination of permeability of fabrics to air
DIN EN ISO 12945-2	2021-04 2000-11	Textiles - Determination of fabric propensity to surface fuzzing and to pilling - Part 2: Modified Martindale method
DIN EN ISO 12945-4	2021-04	Textiles - Determination of fabric propensity to surface pilling, fuzzing or matting - Part 4: Assessment of pilling, fuzzing and matting by visual analysis
DIN EN ISO 12947-1	2007-04	Textiles - Determination of the abrasion resistance of fabrics by the Martindale method - Part 1: Martindale abrasion testing apparatus
DIN EN ISO 12947-2	2017-03	Textiles - Determination of the abrasion resistance of fabrics by the Martindale method - Part 2: Determination of specimen breakdown
DIN EN ISO 12947-3	2007-04	Textiles - Determination of abrasion resistance of fabrics by the Martindale method - Part 3: Determination of mass loss
DIN EN ISO 12947-4	2007-04	Textiles - Determination of abrasion resistance of fabrics by the Martindale method - Part 4: Assessment of appearance change
DIN EN ISO 13934-1	2013-08	Textiles - Tensile properties of fabrics - Part 1: Determination of maximum force and elongation at maximum force using the strip method
DIN EN ISO 13934-2	2014-06	Textiles - Tensile properties of fabrics - Part 2: Determination of maximum force using the grab method
DIN EN ISO 13937-2	2000-06	Textiles - Tear properties of fabrics - Part 2: Determination of tear force of trouser-shaped test specimens (single tear method)
DIN EN ISO 13937-3	2000-06	Textiles - Tear properties of fabrics - Part 3: Determination of tear force of wing-shaped test specimens (Single tear method)
DIN EN ISO 13937-4	2000-06	Textiles - Tear properties of fabrics - Part 4: Determination of tear force of tongue-shaped test specimens (Double tear test)

5 Mechanical-technical testing of polymeric materials and components, leather and textiles

5.1 Determination of the tensile properties of plastics, textiles and leather by means of tensile tests (B)

DIN 53834-2	1979-01	Testing of textiles; Simple tensile test for single and plied yarns in oven-dry state (withdrawn standard)
DIN 53835-1	1987-01	Testing of textiles; tensile test for testing the elastic behaviour; principles
DIN 53835-2	1981-08 2024-05	Testing of textiles; determination of the elastic behaviour of single and plied elastomeric yarns by repeated application of tensile load between constant extension limits

DIN 53835-3	1981-08	Testing of textiles; determination of the elastic behaviour of single and plied yarns by a single application of tensile load between constant extension limits
DIN 53835-4	1981-08	Testing of textiles; determination of the elastic behaviour of single and plied yarns by a single application of tensile load between constant force limits
DIN 53842-1	1976-04	Testing of textiles; knot tensile test for single and plied yarns
DIN 53843-1	1992-11	Testing of textiles; loop tensile test; yarns
DIN 53843-2	1988-03	Testing of textiles; loop tensile test for staple fibres
DIN EN 29073-3	1992-08	Textiles; test method for nonwovens; Part 3: determination of tensile strength and elongation
DIN EN ISO 527-1	2019-12 2012-06	Plastics - Determination of tensile properties - Part 1: General principles
DIN EN ISO 527-2	2012-06 2025-09	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 527-4	2023-07 2022-03 1997-07	Plastics - Determination of tensile properties - Part 4: Test conditions for isotropic and anisotropic fibre-reinforced plastic composites
DIN EN ISO 1421	2017-03	Rubber- or plastics-coated fabrics - Determination of tensile strength and elongation at break
DIN EN ISO 1798	2008-04	Flexible cellular polymeric materials - Determination of tensile strength and elongation at break
DIN EN ISO 2062	2010-04	Textiles - Yarns from packages - Determination of single-end breaking force and elongation at break using constant rate of extension (CRE) tester
DIN EN ISO 3376	2020-08	Leather - Physical and mechanical tests - Determination of tensile strength and percentage elongation
DIN EN ISO 5079	2021-02 1996-02	Textiles - Fibres - Determination of breaking force and elongation at break of individual fibres
DIN EN ISO 9073-3	2023-09	<i>Nonwovens - Test methods - Part 3: Determination of tensile strength and elongation at break using the strip method</i>
DIN EN ISO 10618	2004-11	Carbon fibre - Determination of tensile properties of resin-impregnated yarn (here: <i>Section 9: Performing of tensile test</i>)
DIN EN ISO 13934-1	2013-08	Textiles - Tensile properties of fabrics - Part 1: Determination of maximum force and elongation at maximum force using the strip method
DIN EN ISO 13934-2 ISO 37	2014-06 2024-05	Textiles - Tensile properties of fabrics - Part 2: Determination of maximum force using the grab method <i>Rubber, vulcanized or thermoplastic - Determination of tensile stress-strain properties</i>

5.2 Determination of the tear propagation properties of textiles and plastic films by means of tear propagation tests (B)

DIN 53363	2003-10	Testing of plastic films - Tear test using trapezoidal test specimen with incision
DIN EN 17679	2022-08	<i>Plastics - Plastic films - Determination of tear resistance using a trapezoidal test specimen with incision</i>
DIN EN ISO 4674-1	2017-03	<i>Rubber- or plastics-coated fabrics - Determination of tear resistance - Part 1: Constant rate of tear methods</i>
DIN EN ISO 9073-4	1997-09 2021-05	Textiles - Test methods for nonwovens - Part 4: Determination of tear resistance
DIN EN ISO 13937-2	2000-06	Textiles - Tear properties of fabrics - Part 2: Determination of tear force of trouser-shaped test specimens (single tear method)
DIN EN ISO 13937-3	2000-06	Textiles - Tear properties of fabrics - Part 3: Determination of tear force of wing-shaped test specimens (Single tear method)
DIN EN ISO 13937-4	2000-06	Textiles - Tear properties of fabrics - Part 4: Determination of tear force of tongue-shaped test specimens (Double tear test)
DIN ISO 34-1	2024-12	<i>Rubber, vulcanized or thermoplastic - Determination of tear strength - Part 1: Trouser, angle and crescent test pieces</i>

5.3 Determination of the bending properties of plastics by means of bending tests (B)

DIN EN ISO 178	2019-08	Plastics - Determination of flexural properties
DIN EN ISO 14125	2011-05	Fibre-reinforced plastic composites - Determination of flexural properties
DIN EN ISO 14130	1998-02	Fibre reinforced plastic composites - Determination of apparent interlaminar shear strength by short beam-method

5.4 Determination of the impact strength of plastics by means of impact strength testing (B)

DIN EN ISO 179-1	2023-10 2010-11	Plastics - Determination of Charpy impact properties - Part 1: Non-instrumented impact test
DIN EN ISO 180	2023-09 2020-03 2013-08	Plastics - Determination of Izod impact strength

5.5 Determination of the compressive strength of plastics by means of compression testing / further mechanical-technological tests (B)

DIN EN ISO 604	2003-12	Plastics - Determination of compressive properties
DIN EN ISO 6603-2	2002-04 2023-11	Plastics - Determination of puncture impact behaviour of rigid plastics - Part 2: Instrumented puncture test

6 Colour fastness tests and material tests of plastics and textiles

6.1 Testing the colour fastness of textiles using xenon arc lamps (A)

DIN EN ISO 105-B02	2014-11	Textiles - Tests for colour fastness - Part B02: Colour fastness to artificial light: Xenon arc fading lamp test
DIN EN ISO 105-B04	2024-06	Textiles - Tests for colour fastness - Part B04: Colour fastness to artificial weathering: Xenon arc fading lamp test
DIN EN ISO 105-B06	2020-12 2004-07	Textiles - Tests for colour fastness - Part B06: Colour fastness and ageing to artificial light at high temperatures: Xenon arc fading lamp test
DIN EN ISO 105-C06	2010-08	Textiles - Tests for colour fastness - Part C06: Colour fastness to domestic and commercial laundering
VDA 75202	2001-08	Colour fastness and ageing to artificial light at high temperatures: Xenon-arc fading lamp test

6.2 Testing the colour fastness of textiles using various media and friction (A)

DIN EN ISO 105-C10	2007-07	Textiles - Tests for colour fastness - Part C10: Colour fastness to washing with soap or soap and soda
DIN EN ISO 105-D01	2010-10	Textiles - Tests for colour fastness - Part D01: Colour fastness to dry cleaning using perchloroethylene solvent
DIN EN ISO 105-E01	2013-06	Textiles - Tests for colour fastness - Part E01: Colour fastness to water
DIN EN ISO 105-E02	2013-06	Textiles - Tests for colour fastness - Part E02: Colour fastness to sea water
DIN EN ISO 105-E04	2013-08	Textiles - Tests for colour fastness - Part E04: Colour fastness to perspiration
DIN EN ISO 105-E07	2010-08	Textiles - Tests for colour fastness - Part E07: Colour fastness to spotting: Water
DIN EN ISO 105-X12	2016-11	Textiles - Tests for colour fastness - Part X12: Colour fastness to rubbing

6.3 Grey scale ***

DIN EN 20105-A02	1994-10	Textiles - Tests for colour fastness - Part A02: Grey scale for assessing change in colour
<i>DIN EN 20105-A03</i>	<i>1994-10</i>	<i>Textiles - Tests for colour fastness - Part A03: Grey scale for assessing staining</i>
DIN EN ISO 105-A03	2020-02	Textiles - Tests for colour fastness - Part A03: Grey scale for assessing staining

6.4 Determination of the colour fastness of articles for common use using saliva and sweat (A)

DIN 53160-1	2010-10	Determination of the colourfastness of articles for common use - Part 1: Test with artificial saliva
DIN 53160-2	2010-10	Determination of the colourfastness of articles for common use - Part 2: Test with artificial sweat
DIN 53160	2023-07	Determination of the colour resilience of articles for common use - Test with saliva and perspiration simulants

6.5 Material tests and artificial weathering of plastics and textiles **

DIN EN ISO 1172	2023-12	Textile-glass-reinforced plastics - Prepregs, moulding compounds and laminates - Determination of the textile-glass and mineral-filler content using calcination methods (here: Method A: Determination of the textile-glass content)
DIN EN ISO 3451-1	2019-05 2008-11	Plastics - Determination of ash - Part 1: General methods (here: Method A: direct burn up)
DIN EN ISO 4892-2	2021-11 2013-06	Plastics - Methods of exposure to laboratory light sources - Part 2: Xenon-arc lamps
DIN 53236	2018-02	Colouring materials - Conditions of measurement and evaluation for the determination of colour differences for paint coatings, similar coatings and plastics
DIN 75220	1992-11	Ageing of automotive components in solar simulation units

Excluded from flexible accreditation:

SAA 3.5.L122	2020-01	Determination of the residue on ignition of plastics
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6.6 Determination of the fogging behaviour of trim materials in the interior of automobiles by gravimetric and photometric methods **

DIN 75201	2011-11 2024-06	Determination of the fogging characteristics of trim materials in the interior of automobiles
DIN EN ISO 17071	2011-12	Leather - Physical and mechanical tests - Determination of fogging characteristics
ISO 6452	2021-05 2007-06	Rubber- or plastics-coated fabrics - Determination of fogging characteristics of trim materials in the interior of automobiles
SAE J 1756	2006-08	Determination of the Fogging Characteristics of Interior Automotive Materials

Excluded from flexible accreditation:

PV 3015	2019-03 1994-05	Non-metallic materials of the interior of automobiles – Determination of the condensable components
GMW 3235	2016-08	Fogging Characteristics of Trim Materials
VOLVO STD 420-0003	2014-06	Fogging - Organic Materials

7 Testing of processing, thermal and electrical properties of plastics

7.1 Processing and thermal tests (A)

DIN 53497	2017-04	Testing of plastics - Hot storage test on mouldings made of thermoplastic moulding materials without external mechanical stressing
DIN EN ISO 75-2	2013-08	Plastics - Determination of temperature of deflection under load - Part 2: Plastics and ebonite (here: methods A and B)
DIN EN ISO 306	2023-03	Plastics - Thermoplastic materials - Determination of Vicat softening temperature (VST)
DIN EN ISO 1133	2005-09	Plastics - Determination of the melt mass-flow rate (MFR) and the melt volume-flow rate (MVR) of thermoplastics (withdrawn standard, replaced by DIN EN ISO 1133-1 and DIN EN ISO 1133-2)
DIN EN ISO 1133-1	2022-10	Plastics - Determination of the melt mass-flow rate (MFR) and melt volume-flow rate (MVR) of thermoplastics - Part 1: Standard method
DIN EN ISO 1133-2	2012-03	Plastics - Determination of the melt mass-flow rate (MFR) and melt volume-flow rate (MVR) of thermoplastics - Part 2: Method for materials sensitive to time-temperature history and / or moisture

7.2 Testing of electrical properties (A)

DIN IEC 60093	1993-12	Methods of test for insulating materials for electrical purposes; volume resistivity and surface resistivity of solid electrical insulating materials (withdrawn standard)
DIN EN 60112 IEC 60 112	2010-05	Method for the determination of the proof and the comparative tracking indices of solid insulating materials (VDE - regulation)
DIN EN 60695-2-10 VDE 0471 Teil 2-10	2014-04	Fire hazard testing - Part 2-10: Glowing / hot-wire based test methods – Glow-wire apparatus and common test procedure
DIN EN 60695-2-11 VDE 0471 Teil 2-11	2014-11	Fire hazard testing - Part 2-11: Glowing/hot-wire based test methods – Glow-wire flammability test method for end-products (GWEPT)
DIN EN 60695-2-12 VDE 0471 Teil 2-12	2015-01	Fire hazard testing - Part 2-12: Glowing/hot-wire based test methods – Glow-wire flammability index (GWFI) test method for materials
DIN EN 60695-2-13 VDE 0471 Teil 2-13	2015-01	Fire hazard testing - Part 2-13: Glowing/hot-wire based test methods – Glow-wire ignition temperature (GWIT) test method for materials
DIN EN 62631-3-1	2017-01	Dielectric and resistive properties of solid insulating materials - Part 3-1: Determination of resistive properties (DC methods) - volume resistance and volume resistivity - general method (here: circular ring electrodes)
DIN EN 62631-3-2	2016-10	Dielectric and resistive properties of solid insulating materials - Part 3-2: Determination of resistive properties (DC Methods) - surface resistance and surface resistivity

7.3 Determination of the fire behaviour of materials used in motor vehicle interiors by means of burning tests (B)

DIN 75200	1980-09	Determination of burning behaviour of interior materials in motor vehicles
ISO 3795	1989-10	Road vehicles, and tractors and machinery for agriculture and forestry - Determination of burning behaviour of interior materials
FMVSS 302	2024-10	Flammability of Interior Materials
GB 8410 (VR China)	2006-01	Flammability of Automotive Interior Materials
UN/ECE - R118	2015-04	Uniform technical prescriptions concerning the burning behaviour and/or the capability to repel fuel or lubricant of materials used in the construction of certain categories of motor vehicles (2015/622/EU) (here: annex 6 - Test to determine the horizontal burning rate of materials)

Excluded from flexible accreditation:

VW TL 1010	2008-01	Materials for vehicle interiors; burning behavior, material requirements
BMW GS 97038	2020-02	Determination of burning behaviour to automotive interior trim materials
DBL 5307	2022-11	Supply specification Flame retardant properties - Interior trim parts - Requirements and test specifications (here: 6.1 Test to determine the horizontal burning rate of interior components, materials and material systems)
GMW 3232	2022-10	Test Method for Determining the Flammability of Interior Trim Materials
VCS 5031,19	2018-05	Flammability of interior materials
Porsche PTL 8501 (VW 96243)	2020-10	Interior – Burning behaviour – Requirements and tests

7.4 Determination of the odour behaviour of materials and components in the interior of motor vehicles by means of odour testing (B)

VDA 270 2022-05 Determination of the odour characteristics of trim Odor Test materials in motor vehicles

Excluded from flexible accreditation:

PV 3900 2019-04 Vehicle Interior Components - Odor Test
VOLVO STD 429-0001 2005-01 Odour of trim materials in vehicles
GMW 3205 2021-12 Determining the Resistance to Odor Propagation of Interior Materials

7.5 Determination of strength and hardness of plastics (A)

DIN EN ISO 2039-1 2003-06 Plastics – Determination of hardness – Part 1: Ball indentation method
DIN 53435 2018-09 Testing of Plastics - Bending test and impact test on dynstat test specimens
 2024-10

7.6 Determination of density and bulk density of plastics (A)

DIN EN ISO 845 2009-10 Cellular plastics and rubbers – Determination of apparent density
DIN EN ISO 1183-1 2019-09 Plastics - Methods for determining the density of non-cellular plastics - Part 1: Immersion method, liquid pycnometer method and titration method (*here: methods A and B*)
DIN EN ISO 1183-3 2000-05 Plastics - Methods for determining the density of non-cellular plastics - Part 3: Gas-pycnometer method

7.7 Determination of the water absorption of plastics and the resistance of plastics to liquid (A)

DIN EN ISO 62 2008-05 Plastics - Determination of water absorption
DIN EN ISO 175 2011-03 Plastics - Methods of test for the determination of the effects of immersion in liquid chemicals

8 Biological tests to determine antimicrobial activities as well as biocompatibility

8.1 Antimicrobial testing of textile products, plastics and other materials (B)

DIN EN 17854 2024-10 Antimicrobial wound dressings – Requirements and test method
DIN EN ISO 11737-1 2021-10 Sterilization of health care products – Microbiological methods – Part 1: Determination of a population of microorganisms on products
DIN EN ISO 20743 2021-10 Textiles – Determination of antibacterial activity of textile products
ISO 18184 2025-03 Textiles – Determination of antiviral activity of textile products
(Modification: Testing with bacteriophages)
ISO 21702 2019-05 Measurement of antiviral activity on plastics and other non-porous surfaces
(Modification: Testing with bacteriophages)
ISO 22196 2011-08 Measurement of antibacterial activity on plastics and other non-porous surfaces

8.2 Biocompatibility testing of materials

DIN EN ISO 10993-5 2009-10 Biological evaluation of medical devices – Part 5: Tests for in vitro cytotoxicity
DIN EN ISO 10993-23 2021-10 Biological evaluation of medical devices – Part 23: Tests for irritation
OECD 422D 2022-06 *In vitro* Skin Sensitization – ARE-Nrf2 Luciferase Test Method (KeratinoSens™)
OECD 431 2019-06 *In Vitro* Skin Corrosion: Reconstructed Human Epidermis (RhE) Test method
OECD 439 2019-06 *In Vitro* Skin Irritation: Reconstructed Human Epidermis Test Method

Abbreviations used:

AfPS GS	Ausschuss für Produktsicherheit der Bundesanstalt für Arbeitsschutz und Arbeitsmedizin
ASTM	American Society for Testing and Materials
BfR	Bundesinstitut für Risikobewertung
BMW AA	BMW (Bayerische Motoren Werke Aktiengesellschaft) Arbeitsanweisung
BMW GS	BMW (Bayerische Motoren Werke) Group Standard
CPSC	United States Consumer Product Safety Commission
DBL	Mercedes-Benz Werknorm
DIN	Deutsches Institut für Normung e.V.
EN	Europäische Norm
FLTM	Ford Laboratory Test Method
FMVSS	Federal Motor Vehicle Safety Standard
GB	Guobiao (Nationaler Standard in China)
GM / Opel GMW	General Motors / Opel General Motors Worldwide
HV	Hausverfahren der Ostthüringischen Materialprüfgesellschaft für Textil und Kunststoffe mbH
IEC	International Electrotechnical Commission
ISO	International Organization for Standardization
PTL	Porsche Technische Lieferbedingungen
SAA	Standardarbeitsanweisung der Ostthüringischen Materialprüfgesellschaft für Textil und Kunststoffe mbH
SAE	Society of Automotive Engineers
STD	Standard Volvo Group
UN / ECE	United Nations / Economic Commission for Europe (Wirtschaftskommission der Vereinten Nationen für Europa)
VCS	Volvo Prüfnorm
VDA	Verband Deutscher Automobilhersteller
VOLVO STD	Volvo Group Standard
VW PV	Volkswagen Prüfvorschrift
VW TL	Volkswagen Konzernnorm