DAkkS
Deutsche
Akkreditierungsstelle

Accreditation

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

iLF Magdeburg GmbH
Fichtestraße 29, 39112 Magdeburg

meets the requirements of DIN EN ISO/IEC 17025:2018 for the conformity assessment activities specified in the following partial accreditation certificates. This includes additional existing legal and normative requirements for the testing laboratory, including those in relevant sectoral schemes, provided that these are explicitly confirmed in the annexes to the partial accreditation certificates listed below.

D-PL-18869-01-01
D-PL-18869-01-02
D-PL-18869-01-03

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

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

This accreditation certificate consists of this cover sheet, the reverse side of the cover sheet and the following annex. It only applies in connection with the partial accreditation certificates listed above and the notices referred to there.

Registration number of the certificate: **D-PL-18869-01-00**

Berlin, 11.01.2024 Dr.-Ing. Tobias Poeste
Head of Technical Unit

Translation issued:
11.01.2024 Dr.-Ing. Tobias Poeste
Head of Technical Unit

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

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

See notes overleaf

Deutsche Akkreditierungsstelle GmbH

Office Berlin
Spittelmarkt 10
10117 Berlin

Office Frankfurt am Main
Europa-Allee 52
60327 Frankfurt am Main

Office Braunschweig
Bundesallee 100
38116 Braunschweig

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

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

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

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

EA: www.european-accreditation.org
ILAC: www.ilac.org
IAF: www.iaf.nu

Deutsche Akkreditierungsstelle

Annex to the Partial Accreditation Certificate D-PL-18869-01-01 according to DIN EN ISO/IEC 17025:2018

Valid from: **11.01.2024**

Date of issue: 11.01.2024

This annex is a part of the accreditation certificate D-PL-18869-01-00.

Holder of partial accreditation certificate:

iLF Magdeburg GmbH
Fichtestraße 29, 39112 Magdeburg

with the location

iLF Magdeburg GmbH
Fichtestraße 29, 39112 Magdeburg

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

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

Tests in the fields:

characterisation of physical, mechanical and optical properties of coatings;
determination of resistance of coatings to liquids (chemical resistance tests);
environmental simulation tests on coatings, plastics, metallic materials, with or without corrosion protection and textiles (weathering tests, water condensation tests, corrosion tests, temperature and climate tests);
flexural tests, tensile tests and impact tests on plastics, rubber, adhesive bonds, textiles and metallic materials;
determination of burning behaviour of interior materials in motor vehicles (burning tests);

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

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

Content

1 Physical tests

1.1 Drying tests ***

DIN EN ISO 9117-3 2010-07	Paints and varnishes - Drying tests - Part 3: Surface-drying test using ballotini
DIN EN ISO 9117-5 2012-11	Paints and varnishes - Drying tests - Part 5: Modified Bandow-Wolff test

1.2 Determination of film thickness

1.2.1 Measurement of coating thickness by optical method *

DIN EN ISO 1463 2021-08	Metallic and oxide coatings - Measurement of coating thickness - Microscopical method
DIN EN ISO 2808 2019-12	Paints and varnishes - Determination of film thickness

1.2.2 Measurement of coating thickness by magnetic 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 base metals - Measurement of coating thickness - Amplitude-sensitive eddy current method
DIN EN ISO 2808 2019-12	Paints and varnishes - Determination of film thickness

1.2.3 Measurement of coating thickness of metallic coatings by coulometric method *

DIN EN ISO 1456 2009-12	Metallic and other inorganic coatings - Electrodeposited coatings of nickel, nickel plus chromium, copper plus nickel and of copper plus nickel plus chromium
DIN EN ISO 2177 2004-08	Metallic coatings - Measurement of coating thickness - Coulometric method by anodic dissolution

DIN EN ISO 16866 2023-01	Metallic and other inorganic coatings - Simultaneous thickness and electrode potential determination of individual layers in multilayer nickel deposits (STEP test)
ASTM B 764 2004	Standard Test Method for Simultaneous Thickness and Electrode Potential Determination of Individual Layers in Multilayer Nickel Deposit (STEP Test)

No flexibilization applies to the following test procedure:

PV 1065 2023-10	Determination of Potential Differences and Layer Thicknesses of Nickel Coatings

1.2.4 Determination of cracks and pores by copper deposition method *

DIN 53100 2020-04	Metallic coatings - Electroplated coatings of nickel plus chromium and of copper plus nickel plus chromium on plastics materials
DIN EN ISO 1456 2009-12	Metallic and other inorganic coatings - Electrodeposited coatings of nickel, nickel plus chromium, copper plus nickel and of copper plus nickel plus chromium

No flexibilization applies to the following test procedure:

PV 1058 2020-03	Chrome-Plated Surfaces; Determination of the Micro-Crack Pattern on Chrome-Plated Surfaces
PV 1063 2024-02	Chrome-Plated Surfaces; Determining the Micropore Density

1.3 Permeability tests ***

DIN EN 927-5 2023-08	Paints and varnishes - Coating materials and coating systems for exterior wood - Part 5: Assessment of the liquid water permeability
DIN EN 1062-3 2008-04	Paints and varnishes - Coating materials and coating systems for exterior masonry and concrete - Part 3: Determination of liquid water permeability
DIN EN ISO 7783 2019-02	Paints and varnishes - Determination of water-vapour transmission properties - Cup method

2 Mechanical tests

2.1 Determination of mechanical-technological properties ***

DIN EN ISO 1519 2011-04	Paints and varnishes - Bend test (cylindrical mandrel)
DIN EN ISO 1520 2007-11	Paints and varnishes - Cupping test
DIN EN ISO 1522 2023-02	Paints and varnishes - Pendulum damping test
DIN EN ISO 6272-1 2011-11	Paints and varnishes - Rapid-deformation (impact resistance) tests - Part 1: Falling-weight test, large-area indenter

No flexibilization applies to the following test procedure:

PV 3966 2021-09	PP Components; Stress Whitening Properties (Ball Drop Test)
PV3989 2023-12	Low-Temperature Behavior of Plastic Components (Ball-Drop Test)

2.2 Adhesion tests

2.2.1 Pull-off test for assessment of the adhesion of coatings *

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 ISO 4624 2023-09	Paints and varnishes - Pull-off test for adhesion
DIN EN ISO 16276-1 2007-08	Corrosion protection of steel structures by protective paint systems - Assessment of, and acceptance criteria for, the adhesion/cohesion (fracture strength) of a coating - Part 1: Pull-off testing

2.2.2 Cross-cut testing and X-cut testing for assessment of the adhesion of coatings *

DIN EN ISO 2409 2020-12	Paints and varnishes - Cross-cut test
DIN EN ISO 16276-2 2007-08	Corrosion protection of steel structures by protective paint systems - Assessment of, and acceptance criteria for, the adhesion/cohesion (fracture strength) of a coating - Part 2: Cross-cut testing and X-cut testing

No flexibilization applies to the following test procedure:

DBL 5416 2017-08	Parts manufactured from Thermoplastics for Paneling, Housings and Functional Parts for External Applications
DBL 5425 2020-07	Coating / Paintwork of Plastic Parts in the Vehicle Exterior
MBN 10494-5 2023-10	Paint Test Methods - Part 5: Technical-Mechanical Tests
AA-0180 2021-04	Cross hatch testing
FLTM BI 106-01 2017-05	Coating adhesion test

2.2.3 Scratch test*

MBN 10494-5 2023-10	Paint Test Methods - Part 5: Technical-Mechanical Tests
MAN 277 2019-03	Coatings - Adhesion test (scratch test)

2.3 Stone-chipping tests ***

DIN EN ISO 20567-1 2017-07	Paints and varnishes - Determination of stone-chip resistance of coatings - Part 1: Multi-impact testing

No flexibilization applies to the following test procedure:

DBL 5416 2017-08	Parts manufactured from Thermoplastics for Paneling, Housings and Functional Parts for External Applications
DBL 5425 2020-07	Coating / Paintwork of Plastic Parts in the Vehicle Exterior
MBN 10494-5 2023-10	Paint Test Methods - Part 5: Technical-Mechanical Tests
TL 52711 2021-03	Underbody Applications; Engine Encapsulations, Transmission Encapsulations, and c_d-Enhancing Underbody Panels Made of LWRT
AA-0079 2019-02	Determination of multi-impact stone chip resistance
PR 11737558-000-06 2022-09	Underbody add-on parts
FLTM BI 157-06 2019-01	High performance stone chip resistance test new rating scale

2.4 Steam-jetting tests ***

DIN EN ISO 16925 2022-06	Paints and varnishes - Determination of the resistance of coatings to pressure water-jetting

No flexibilization applies to the following test procedure:

DBL 5416 2017-08	Parts manufactured from Thermoplastics for Paneling, Housings and Functional Parts for External Applications
DBL 5425 2020-07	Coating / Paintwork of Plastic Parts in the Vehicle Exterior
MBN 10494-5 2023-10	Paint Test Methods - Part 5: Technical-Mechanical Tests

STD4234 2004-05	Paints and varnishes - Determination of adhesion when subjected to high-pressure spraying with water
FLTM BO 160-04 2018-02	Resistance of painted plastic parts to high pressure cleaning operations
TPJLR.52.561 2009-11	Resistance of painted exterior parts to high pressure cleaning operations

2.5 Abrasion and scratch tests

2.5.1 Determination of wet-scrub resistance ***

DIN EN 13300 2023-02	Paints and varnishes - Water-borne coating materials and coating systems for interior walls and ceilings - Classification
DIN EN ISO 11998 2006-10	Paints and varnishes - Determination of wet-scrub resistance and cleanability of coatings

2.5.2 Abrasion tests using the ABREX® test rig ***

DIN EN 60068-2-70 1996-07	Environmental testing - Part 2: Tests - Test Xb: Abrasion of markings and letterings caused by rubbing of fingers and hands

2.5.3 Scratch tests on coatings using scratch hardness testers and spring-loaded pens *

DIN EN ISO 1518-1 2023-05	Paints and varnishes - Determination of scratch resistance - Part 1: Constant-loading method
DIN EN ISO 22557 2021-02	Paints and varnishes - Scratch test using a spring-loaded pen

No flexibilization applies to the following test procedure:

PV 3952 2021-03	Plastic Components; Determination of the Scratch Resistance of Surfaces without Finish Treatment in Vehicle Interiors and Exteriors
PV 3974 2022-05	Plastic Components; Determination of the Mar Resistance of Surfaces without Finish Treatment in Vehicle Interiors And Exteriors

2.5.4 Scratch tests on coatings using a crockmeter *

DIN EN ISO 105-X12 2016-11	Textiles - Tests for colour fastness - Part X12: Colour fastness to rubbing
DIN EN ISO 21546 2021-02	Paints and varnishes - Determination of the resistance to rubbing using a linear abrasion tester (crockmeter)

No flexibilization applies to the following test procedure:

PV 3906 2021-11	Non-Metallic Planar Materials; Testing the Abrasion Behavior
PV 3987 2022-05	Scrub Resistance (Micro-Scratch Resistance) of High-Gloss Surfaces in the Vehicle Interior
PV 3991 2021-01	Structured Surfaces; Skin Abrasion Testing

3 Optical tests

3.1 Evaluation of colour coordinates of coatings by colour measurement *

DIN 6167 1980-01	Description of yellowness of near-white or near-colourless materials
DIN EN ISO 6504-3 2020-04	Paints and varnishes - Determination of hiding power - Part 3: Determination of hiding power of paints for masonry, concrete and interior use
DIN EN ISO 18314-1 2018-12	Analytical colorimetry - Part 1: Practical colour measurement
DIN EN ISO/CIE 11664-4 2020-03	Colorimetry - Part 4: CIE 1976 L*a*b* colour space

No flexibilization applies to the following test procedure:

MBN 10494-4 2021-02	Paint Test Methods - Part 4: Optical Tests

VW 50190 2017-11	Vehicle Interior Equipment Components; Measurement-Based Evaluation of Colour and Gloss Level; Visual Evaluation of Chrome Surfaces
VW 50195 2019-03	Colorimetric Evaluation of Exterior Automotive Paint Finishes
VW 50196 2019-02	Decorative Exterior Parts in Non-Body Colour; Determining Colour and Gloss
AA-0161 2022-06	Colour Measurement on Bodies and Hang On Parts
AA-0354 2022-03	Technical Understanding of Colour Measurement and the Measurement of Test Panels for Initial and Batch Release

3.2 Determination of gloss value ***

DIN EN ISO 2813 2015-02	Paints and varnishes - Determination of gloss value at 20°, 60° and 85°
MBN 10494-4 2021-02	Paint Test Methods - Part 4: Optical Tests
VW 50190 2017-11	Vehicle Interior Equipment Components; Measurement-Based Evaluation of Colour and Gloss Level; Visual Evaluation of Chrome Surfaces
VW 50196 2019-02	Decorative Exterior Parts in Non-Body Colour; Determining Colour and Gloss
AA-0101 2023-10	Reflectometer Value

3.3 Visual evaluation of textiles and coatings *

DIN EN 20105-A02 1994-10	Textiles - Tests for colour fastness - Part A02: Grey scale for assessing change in colour
DIN EN ISO 105-A03 2020-02	Textiles - Tests for colour fastness - Part A03: Grey scale for assessing staining
DIN EN ISO 3668 2020-05	Paints and varnishes - Visual comparison of colour of paints

DIN EN ISO 4628-1 2016-07	Paints and varnishes - Evaluation of degradation of coatings - Designation of quantity and size of defects, and of intensity of uniform changes in appearance - Part 1: General introduction and designation system
DIN EN ISO 4628-2 2016-07	Paints and varnishes - Evaluation of degradation of coatings - Designation of quantity and size of defects, and of intensity of uniform changes in appearance - Part 2: Assessment of degree of blistering
DIN EN ISO 4628-3 2016-07	Paints and varnishes - Evaluation of degradation of coatings - Designation of quantity and size of defects, and of intensity of uniform changes in appearance - Part 3: Assessment of degree of rusting
DIN EN ISO 4628-4 2016-07	Paints and varnishes - Evaluation of degradation of coatings - Designation of quantity and size of defects, and of intensity of uniform changes in appearance - Part 4: Assessment of degree of cracking
DIN EN ISO 4628-5 2023-03	Paints and varnishes - Evaluation of degradation of coatings - Designation of quantity and size of defects, and of intensity of uniform changes in appearance - Part 5: Assessment of degree of flaking
DIN EN ISO 4628-6 2024-01	Paints and varnishes - Evaluation of degradation of coatings - Designation of quantity and size of defects, and of intensity of uniform changes in appearance - Part 6: Assessment of degree of chalking by tape method
DIN EN ISO 4628-7 2016-07	Paints and varnishes - Evaluation of degradation of coatings - Designation of quantity and size of defects, and of intensity of uniform changes in appearance - Part 7: Assessment of degree of chalking by velvet method
DIN EN ISO 4628-8 2013-03	Paints and varnishes - Evaluation of degradation of coatings - Designation of quantity and size of defects, and of intensity of uniform changes in appearance - Part 8: Assessment of degree of delamination and corrosion around a scribe or other artificial defect
DIN EN ISO 4628-10 2016-07	Paints and varnishes - Evaluation of degradation of coatings - Designation of quantity and size of defects, and of intensity of uniform changes in appearance - Part 10: Assessment of degree of filiform corrosion

No flexibilization applies to the following test procedure:

MBN 10494-4 2021-02	Paint Test Methods - Part 4: Optical Tests
MBN 10494-6 2021-03	Paint Test Methods - Part 6: Climatic Tests
VW 50190 2017-11	Vehicle Interior Equipment Components; Measurement-Based Evaluation of Colour and Gloss Level; Visual Evaluation of Chrome Surfaces (here: *Visual evaluation of chrome surfaces*)

4 Determination of resistance of coatings to liquids by chemical resistance tests *

DIN EN ISO 2812-1 2018-03	Paints and varnishes - Determination of resistance to liquids - Part 1: Immersion in liquids other than water
DIN EN ISO 2812-2 2019-03	Paints and varnishes - Determination of resistance to liquids - Part 2: Water immersion method
DIN EN ISO 2812-3 2019-08	Paints and varnishes - Determination of resistance to liquids - Part 3: Method using an absorbent medium
DIN EN ISO 2812-4 2018-03	Paints and varnishes - Determination of resistance to liquids - Part 4: Spotting methods

No flexibilization applies to the following test procedure:

DBL 5416 2017-08	Parts manufactured from Thermoplastics for Paneling, Housings and Functional Parts for External Applications
DBL 5425 2020-07	Coating / Paintwork of Plastic Parts in the Vehicle Exterior
MBN 10494-7 2022-06	Paint Test Methods - Part 7: Resistance to Chemicals, Test Mixtures and Test Concentrates
PV 3964 2008-02	Surfaces in the Passenger Compartment; Testing of Cream Resistance
AA-0053 2017-04	Sun cream resistance of painted parts in the interior

AA-0055 2023-10	Chemical resistance test of surfaces
PR 557 2020-05	Resistance of unpainted thermoplastic surfaces in interior and exterior area to media
FLTM BI 104-01 2023-01	Water immersion test for painted parts and panels

5 Environmental simulation tests

5.1 Weathering tests

5.1.1 Methods of exposure of textiles, plastics and coatings to xenon arc lamps *

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-B06 2020-12	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 4892-2 2021-11	Plastics - Methods of exposure to laboratory light sources - Part 2: Xenon-arc lamps
DIN EN ISO 16474-2 2022-11	Paints and varnishes - Methods of exposure to laboratory light sources - Part 2: Xenon-arc lamps
SAE J 2527 2017-09	Performance based standard for accelerated exposure of automotive exterior materials using a controlled irradiance xenon-arc apparatus

No flexibilization applies to the following test procedure:

DBL 5425 2020-07	Coating / Paintwork of Plastic Parts in the Vehicle Exterior
DBL 5555 2014-04	Finished Parts and Semi-Finished Products Made of Organic Polymer Materials - General Conditions and Test Methods
MBN 10494-6 2021-03	Paint Test Methods - Part 6: Climatic Tests

PV 1303 2021-05	Non-Metallic Materials; Xenon Arc Light Aging of Vehicle Interior Parts
PV 3929 2023-01	Non-Metallic Materials; Weathering in Dry, Hot Climate (Exterior)
PV 3930 2023-01	Weathering in Humid, Hot Climate (Exterior)
PSA D27 1389 2007-07	Paint coatings - Rubbers and plastics - Artificial ageing by Weather-Ometer

5.1.2 Methods of exposure of plastics and coatings to fluorescent UV lamps *

DIN EN 927-6 2018-12	Paints and varnishes - Coating materials and coating systems for exterior wood - Part 6: Exposure of wood coatings to artificial weathering using fluorescent UV lamps and water
DIN EN ISO 4892-3 2016-10	Plastics - Methods of exposure to laboratory light sources - Part 3: Fluorescent UV lamps
DIN EN ISO 16474-3 2021-04	Paints and varnishes - Methods of exposure to laboratory light sources - Part 3: Fluorescent UV lamps

No flexibilization applies to the following test procedure:

MBN 10494-6 2021-03	Paint Test Methods - Part 6: Climatic Tests

5.2 Water condensation tests

5.2.1 Condensation exposure for determination of resistance of coatings to humidity *

DIN EN ISO 6270-1 2018-04	Paints and varnishes - Determination of resistance to humidity – Part 1: Condensation (single-sided exposure)
DIN EN ISO 6270-2 2018-04	Paints and varnishes - Determination of resistance to humidity – Part 2: Condensation (in-cabinet exposure with heated water reservoir)
ISO 11503 1995-07	Paints and varnishes - Determination of resistance to humidity (intermittent condensation)

No flexibilization applies to the following test procedure:

MBN 10494-6 2021-03	Paint Test Methods - Part 6: Climatic Tests

5.2.2 Condensation exposure for determination of resistance of coatings to humid atmospheres containing sulfur dioxide *

DIN EN ISO 22479 2022-08	Corrosion of metals and alloys - Sulfur dioxide test in a humid atmosphere (fixed gas method)

5.3 Corrosion tests

5.3.1 Salt spray tests for assessment of the corrosion resistance of metallic materials, with or without corrosion protection *

DIN EN ISO 9227 2023-03	Corrosion tests in artificial atmospheres - Salt spray tests
ASTM B 117 2019	Standard Practice for Operating Salt Spray (Fog) Apparatus

No flexibilization applies to the following test procedure:

MBN 10494-6 2021-03	Paint Test Methods - Part 6: Climatic Tests

5.3.2 Corrosion cycle tests for determination of resistance of coatings to cyclic corrosion conditions *

DIN EN ISO 11997-1 2018-01	Paints and varnishes - Determination of resistance to cyclic corrosion conditions - Part 1: Wet (salt fog)/dry/humid
DIN EN ISO 11997-2 2013-12	Paints and varnishes - Determination of resistance to cyclic corrosion conditions - Part 2: Wet (salt fog)/dry/humidity/UV light
DIN EN ISO 11997-3 2024-01	Paints and varnishes - Determination of resistance to cyclic corrosion conditions - Part 3: Testing of coating systems on materials and components in automotive construction

ASTM G 85 2019	Standard Practice for Modified Salt Spray (Fog) Testing

No flexibilization applies to the following test procedure:

MBN 10494-6 2021-03	Paint Test Methods - Part 6: Climatic Tests
PV 1078 2024-01	Subframe ASSY and Chassis Parts in Steel Construction; Intensified Corrosion and Temperature Cycle Test (VKTT)
PV 1207 2023-06	Aluminum Add-on Parts; Corrosion Test (Environmental Corrosion Cycle Test)
PV 1208 2023-01	Heat Exchangers Made of Aluminum Alloys; Corrosion Test (SWAAT)
PV 1209 2023-09	Add-On Parts/Hang-On Parts with a Zinc or Zinc Alloy Coating and Aluminum Add-On Parts/Hang-On Parts (e.g., Heat Exchanger, Refrigerant Line); Corrosion Test (Environmental Corrosion Cycle Test)
PV 1210 2016-02	Body and Add-On Parts/Hang-On Parts; Corrosion Test

5.4 Temperature and climate tests for determination of resistance of coatings *

DIN EN 3665 1997-08	Aerospace series - Test methods for paints and varnishes - Filiform corrosion resistance test on aluminium alloys
DIN EN ISO 4623-1 2019-01	Paints and varnishes - Determination of resistance to filiform corrosion - Part 1: Steel substrates
DIN EN ISO 4623-2 2016-12	Paints and varnishes - Determination of resistance to filiform corrosion - Part 2: Aluminium substrates

No flexibilization applies to the following test procedure:

DBS 918 020 2013-03	Labelling of railway vehicles - Self-adhesive films for exterior lettering and outdoor advertising
DBS 918 021 2015-07	Labelling of railway vehicles - Self-adhesive films for interior lettering

DBL 5416 2017-08	Parts manufactured from Thermoplastics for Paneling, Housings and Functional Parts for External Applications
DBL 5425 2020-07	Coating / Paintwork of Plastic Parts in the Vehicle Exterior
MBN 10494-6 2021-03	Paint Test Methods - Part 6: Climatic Tests
TL 211 2023-04	Coating of Plastic Exterior Parts; Requirements
TL 212 2021-06	Oxide Coatings on Aluminum Parts; Surface Protection Requirements
TL 226 2020-10	Paintwork on Materials of Vehicle Interior Equipment; Requirements
PV 1200 2022-11	Vehicle Parts; Testing the Environmental Cycle Resistance (80 °C/ -40 C)
PV 2005 2021-06	Vehicle Parts; Environmental Cycle Resistance Testing of Special Parts, New Developments, and Solutions
PV3959 2020-04	Hydrolysis Test on Components with Foam-Laminated Decorative Material in the Vehicle Interior
PV 7201 2022-03	Alloy Wheel; Testing of Filiform Corrosion Properties
VW 96379 2006-04	Exterior; Testing of Add-on Parts; Climatic Test
VW 96380 2015-07	Corrosion Test; Modified Environmental Cycle Test
AA-0326 2017-12	SCAB Corrosion Test
PR 303.6 2020-06	Alternating climate test for trim parts
VCS 1027,1449 2014-02	Cyclic atmospheric corrosion test with salt load - Accelerated corrosion test, version II - ACT II

STD4445 2014-08	Accelerated corrosion test, version II (ACT2)
CETP 00.00-L-467 2009-03	Global laboratory accelerated cyclic corrosion test
CETP 00.00-L-3190 2022-02	Global laboratory accelerated cyclic corrosion test for painted aluminum panels

6 Flexural tests, tensile tests and impact tests

6.1 Determination of flexural properties of plastics by flexural tests *

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

No flexibilization applies to the following test procedure:

TL 52711 2021-03	Underbody Applications; Engine Encapsulations, Transmission Encapsulations, and cd-Enhancing Underbody Panels Made of LWRT
PV 3954 2021-06	Floor Covering ASSYs; Determination of Bending Stiffness

6.2 Determination of tensile properties of rubber, adhesive bonds, textiles, plastics and metallic materials by tensile tests *

DIN 53504 2017-03	Testing of rubber - Determination of tensile strength at break, tensile stress at yield, elongation at break and stress values in a tensile test
DIN EN 1464 2010-06	Adhesives - Determination of peel resistance of adhesive bonds - Floating roller method
DIN EN 1465 2009-07	Adhesives - Determination of tensile lap-shear strength of bonded assemblies
DIN EN ISO 527-1 2019-12	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 527-4 2023-07	Plastics - Determination of tensile properties - Part 4: Test conditions for isotropic and anisotropic fibre-reinforced plastic composites
DIN EN ISO 527-5 2022-05	Plastics - Determination of tensile properties - Part 5: Test conditions for unidirectional fibre-reinforced plastic composites
DIN EN ISO 6892-1 2020-06	Metallic materials - Tensile testing - Part 1: Method of test at room temperature
DIN EN ISO 9073-3 2023-09	Textiles; test method for nonwovens; part 3: determination of tensile strength and elongation

No flexibilization applies to the following test procedure:

MBN 10494-8 2016-03	Paint Test Methods - Part 8: Adhesion of Adhesives on the Coating
MBN 10526 2018-07	Test Methods for Self-Adhesive Components
TL 239 2022-10	Alloy Wheels; Surface Protection Requirements
PV 2034 2020-09	Non-Metallic Planar Materials; Floating Roller Peel Test
PV 3973 2021-03	Elastomer O-Rings; Determining Tensile Strength, Elongation at Tear and Stress Values in the Tensile Test

6.3 Determination of impact properties of plastics by impact tests *

DIN 53435 2018-09	Testing of plastics - Bending test and impact test on dynstat test specimens
DIN EN ISO 179-1 2023-10	Plastics - Determination of Charpy impact properties - Part 1: Non-instrumented impact test

7 Determination of burning behaviour of interior materials in motor vehicles by burning tests*

7.1 Burning test in a combustion chamber

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

No flexibilization applies to the following test procedure:

DBL 5307 2022-11	Flame retardant properties – Interior trim parts - Requirements and test specifications
TL 1010 2008-01	Materials for Vehicle Interiors; Burning Behavior, Material Requirements
GS 97038 2020-02	Determination of burning behavior to automotive interior trim materials
BSDM0500 2020-12	Flammability test method for interior materials

7.2 Surface and edge flame exposure test

DIN EN 60695-11-10 2014-10	Fire hazard testing - Part 11-10: Test flames - 50 W horizontal and vertical flame test methods

No flexibilization applies to the following test procedure:

TL 1011 2019-03	Flammability of Non-Metallic Materials; Flammability; Materials Requirements
PV 3357 2024-01	Sound Insulation Materials; Behavior on Flame Exposure with a Burner; Surface and Edge Flame Exposure Test

Abbreviations used:

AA	BMW Work Instruction
ASTM	American Society for Testing and Materials
BMW	Bayerische Motorenwerke AG
CETP	Corporate Engineering Test Procedure
DBL	Mercedes-Benz Company Standard
DBS	Deutsche Bahn-Standard
DIN	German institute for standardization
EN	European Standard
FLTM	Ford Laboratory Test Method
GMW	General Motors Worldwide Engineering Standard
GS	BMW Group Standard
IEC	International Electrotechnical Commission
ISO	International Organization for Standardization
MBN	Mercedes-Benz Company Standard
MS	Hyundai Kia Motor Material Specification
NES	Nissan Engineering Standard
PR	BMW Test Specification
PSA	Peugeot Société Anonyme
PV	VW Group Standard
RL	Guideline
SAE	Society of Automotive Engineers
STD	Scania Standard
TL	VW Group Standard
TPJLR	Jaguar Cars & Land Rover - Engineering Test Procedure
VCS	Volvo-Car-Corporation Standard
VDA	German Association of the Automotive Industry
VdL	German Paint and Printing Ink Association
VW	Volkswagen AG

Deutsche Akkreditierungsstelle

Annex to the Partial Accreditation Certificate D-PL-18869-01-02 according to DIN EN ISO/IEC 17025:2018

Valid from: **11.01.2024**

Date of issue: 11.01.2024

This annex is a part of the accreditation certificate D-PL-18869-01-00.

Holder of partial accreditation certificate:

iLF Magdeburg GmbH
Fichtestraße 29, 39112 Magdeburg

with the location

iLF Magdeburg GmbH
Fichtestraße 29, 39112 Magdeburg

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

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

Tests in the fields:

testing and assessing the ease of decontamination of radioactively contaminated surfaces; analysis of emissions from vehicle interior parts and materials, building products and furnishing

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

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

Within the scope of accreditation marked with *, 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 Testing and assessing the ease of decontamination of radioactively contaminated surfaces *

ISO 8690 2020-08	Measurement of radioactivity - Gamma ray and beta emitting radionuclides - Test method to assess the ease of decontamination of surface materials
DIN ISO 8690 2022-10	Measurement of radioactivity - Gamma ray and beta emitting radionuclides - Test method to assess the ease of decontamination of surface materials
DIN 25415 2012-11	Radioactively contaminated surfaces - Method for testing and assessing the ease of decontamination

2 Analysis of emissions

2.1 Determination of the fogging characteristics of trim materials in the interior of automobiles using a fogging device *

DIN 75201 2011-11	Determination of the fogging characteristics of trim materials in the interior of automobiles
ISO 6452 2021-05	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
PV 3015 2019-03	Fogging Behavior of Materials Used in the Vehicle Interior; Gravimetric Determination of Condensable Components
Volvo STD 420-0003 2014-06	Organic materials - Fogging
BSDM0503 2022-01	Fogging test method for non-metallic materials (here: *Method B*)

TSM0503G 2019-04	Fogging test method for non-metallic materials (here: *Method B*)

2.2 Determination of the odour characteristics ***

SAE J 1351 2015-07	Hot Odor Test for Insulation Materials
VDA 270 2022-05	Determination of the odour characteristics of trim materials in motor vehicles
PV 3900 2019-04	Vehicle Interior Components; Odor Test
GS 97014-4 2021-12	Emissions measurement with air exchange in a testing chamber; Determination of the olfactory behavior
VCS 1027,2729 2016-11	Organic materials - Odour of trim materials in vehicles
Renault D49 3001 / - - E 2015-01	Odour emissions, internal equipment parts - Intensity evaluation and global odour characterization
FLTM BO 131-03 2017-05	Interior odor test
BSDM0505 2022-01	Smell quality of non-metallic materials
TSM0505G 2019-02	Smell quality of non-metallic materials
TPJLR.52.458 2014-05	Determination and assessment of odour from interior trim materials, components and assemblies
MS 300-34 2002-10	Test method of odor for interior parts

2.3 Determination of aldehyde and ketone emissions ***

DIN ISO 16000-3 2023-12	Indoor air - Part 3: Determination of formaldehyde and other carbonyl compounds in indoor air and test chamber air - Active sampling method

VDI 3862 Blatt 3 2000-12	Gaseous emission measurement - Measurement of aliphatic and aromatic aldehydes and ketones by DNPH method - Cartridges method
VDA 275 1994-07	Moulded composites and fleeces for vehicles - Determination of formaldehyde release - Test procedure called modified flask method
PV 3925 2021-01	Polymer Materials; Determination of Formaldehyde Emission; Measurement by a Modified Bottle Method
AA-0061 2018-09	Formaldehyde emission from non-metallic materials and components, determined by HPLC
VCS 1027,2739 2004-03	Determination of formaldehyde emission from components in vehicle interiors
Renault D40 3004 / - - A 2011-07	Analysis of formaldehyde and other carbonyl compounds
FLTM BZ 156-01 2011-07	Determination of formaldehyde, aldehyde, and ketone emissions from non-metallic components, parts and materials in the vehicle interior

2.4 Determination of the emission of volatile organic compounds from vehicle interior parts and materials, building products and furnishing using the test chamber method *

DIN ISO 12219-4 2013-12	Interior air of road vehicles - Part 4: Method for the determination of the emissions of volatile organic compounds from vehicle interior parts and materials - Small chamber method
DIN ISO 12219-6 2017-08	Interior air of road vehicles - Part 6: Method for the determination of the emissions of semi-volatile organic compounds from vehicle interior parts and materials at higher temperature - Small chamber method
DIN EN ISO 16000-9 2008-04	Indoor air - Part 9: Determination of the emission of volatile organic compounds from building products and furnishing - Emission test chamber method
PV 3942 2021-11	Emission Behavior of Parts, Components, and Semi-Finished Products for the Vehicle Interior; Testing Using the DUT Chamber Method (deviation: *0,25 m^3 test chamber*)

GS 97014-3 2014-04	Emissions measurement with air exchange in a testing chamber; Determination of volatile, organic emissions from components, semi-finished products and materials

2.5 Determination of volatile organic compounds and phthalates with gas chromatography/mass spectrometry *

DIN ISO 16000-6 2022-03	Indoor air - Part 6: Determination of volatile organic compounds in indoor and test chamber air by active sampling on Tenax TA® sorbent, thermal desorption and gas chromatography using MS or MS-FID
DIN ISO 16000-33 2017-12	Indoor air - Part 33: Determination of phthalates with gas chromatography/mass spectrometry (GC/MS)

2.6 Determination of emission of organic compounds ***

VDA 277 1995-01	Non-metallic materials in automotive interior trim - Determination of emission of organic compounds
PV 3341 1995-03	Non-Metallic Materials in Automotive Interior Trim; Determination of emission of organic compounds
VCS 1027,2749 2004-03	Determination of organic emission from non-metallic materials in vehicle interiors
FLTM BZ 157-01 2011-03	Determination of organic emissions from non-metallic materials in vehicle interiors by Headspace Gas Chromatography

2.7 Thermal desorption analysis of organic emissions ***

VDA 278 2016-05	Thermal Desorption Analysis of Organic Emissions for the Characterization of Non-Metallic Materials for Automobiles
Renault D42 3109 / - - B 2011-10	Vehicle passenger compartment materials evaluation of the quantity of volatile organic compounds (VOC) by thermal desorption/GC/MS (FID)
PSA D10 5495	Test for interior materials vehicle - Evaluation of the amount of volatile organic compounds (VOCs) by thermodesorptions/GS/MS

Abbreviations used:

AA	Arbeitsanweisung der BMW AG - Work instruction of BMW AG
BMW	Bayerische Motorenwerke AG
DIN	Deutsches Institut für Normung e.V. - German institute for standardization
EN	Europäische Norm - European Standard
FLTM	Ford Laboratory Test Method
GS	BMW Group Standard
IEC	International Electrotechnical Commission
ISO	International Organization for Standardization
MS	Hyundai Kia Motor Material Specification
PSA	Peugeot Société Anonyme
PV	Prüfvorschrift der VW AG - Test specification of VW AG
SAE	Society of Automotive Engineers
STD	Scania Standard
TPJLR	Jaguar Cars & Land Rover - Engineering Test Procedure
VCS	Volvo-Car-Corporation Standard
VDA	Verband der Automobilindustrie - German Association of the Automotive Industry
VW	Volkswagen AG

Deutsche Akkreditierungsstelle

Annex to the Partial Accreditation Certificate D-PL-18869-01-03 according to DIN EN ISO/IEC 17025:2018

Valid from: **11.01.2024**

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iLF Magdeburg GmbH
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with the location

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

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

Tests in the fields:

Chemical-analytical tests on coating materials, plastics and other organic substances

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

Within the scope of accreditation marked with *, 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 Chemical material analysis

1.1 Physico-chemical analytical methods***

DIN EN ISO 2811-1 2023-04	Paints and varnishes - Determination of density - Part 1: Pycnometer method
DIN EN ISO 3251 2019-09	Paints, varnishes and plastics - Determination of non-volatile-matter content
DIN EN ISO 11890-1 2007-09	Paints and varnishes - Determination of volatile organic compound (VOC) content - Part 1: Difference method

1.2 Determination of the content of volatile organic compounds in plastics and coating materials using gas chromatography*

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 ISO 11890-2 2020-12	Paints and varnishes - Determination of volatile organic compounds (VOC) and/or semi volatile organic compounds (SVOC) content - Part 2: Gas-chromatographic method
DIN EN ISO 17895 2005-06	Paints and varnishes - Determination of the volatile organic compound content of low-VOC emulsion paints (in-can VOC)

1.3 Infrared spectroscopy***

DIN EN 1767 1999-09	Products and systems for the protection and repair of concrete structures - Test methods - Infrared analysis
DIN 51453 2004-10	Testing of lubricants - Determination of oxidation and nitration of used motor oils - Infrared spectrometric method

1.4 Determination of the formaldehyde concentration ***

VdL-RL 03 2018-02	Guideline for the determination of the formaldehyde concentration in water-dilutable paints and varnishes, and polymer dispersions (here: *Acetylacetone method for determining the free in-can formaldehyde concentration*)

Abbreviations used:

DIN	German institute for standardization
EN	European Standard
IEC	International Electrotechnical Commission
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