

## Deutsche Akkreditierungsstelle

### Annex to the Accreditation Certificate D-PL-11086-01-00 according to DIN EN ISO/IEC 17025:2018

**Valid from:** 06.12.2024

**Date of issue:** 14.03.2025

Holder of accreditation certificate:

**IFO Institut für Oberflächentechnik GmbH**  
**Alexander-von-Humboldt-Straße 19, 73525 Schwäbisch Gmünd**

with the location

**IFO Institut für Oberflächentechnik GmbH**  
**Alexander-von-Humboldt-Straße 19, 73525 Schwäbisch Gmünd**

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.

*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>.*

Abbreviations used: see last page

**Page 1 of 10**

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

**Annex to the Accreditation Certificate D-PL-11086-01-00**

Tests in the fields:

**Analysis of coatings and surfaces on metals, plastics against corrosion, climatic and environmental stress and other stress factors; corrosion analysis, including chemical, chemical-physical tests on layers of metallic and non-metallic materials and components such as surfaces of metals, plastics and coatings; analysis of mechanical properties of coatings; analysis of performance characteristics of coatings using selected non-destructive tests**

**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.**

**Within the scope of accreditation marked with \*\*, the testing laboratory is permitted, without being required to inform or obtain prior approval from DAkkS, to freely select standardized or equivalent test methods within the defined test areas.**

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

**1 Chemical and chemical-physical tests on coatings \***

ISO 2143 2010-07	Anodizing of aluminium and its alloys – Estimation of loss of absorptive power of anodic oxidation coatings after sealing – Dye-spot test with prior acid treatment
DIN EN ISO 2143 2010-12	Anodizing of aluminium and its alloys - Estimation of loss of absorptive power of anodic oxidation coatings after sealing - Dye-spot test with prior acid treatment
DIN EN ISO 3210 2010-12	Anodizing of aluminium and its alloys - Assessment of quality of sealed anodic oxidation coatings by measurement of the loss of mass after immersion in phosphoric acid/chromic acid solution
DIN EN 12373-4 1999-04	Aluminium and aluminium alloys – Anodizing – Part 4: Estimation of loss of absorptive power of anodic oxidation coatings after sealing by dye spot test with prior acid treatment
DIN EN ISO 2812-1 2018-03	Paints and varnishes - Determination of resistance to liquids - Part 1: Immersion in liquids other than water

Valid from: 06.12.2024

Date of issue: 14.03.2025

**Page 2 of 10**

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

**Annex to the Accreditation Certificate D-PL-11086-01-00**

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

**2 Analysis of mechanical properties of coatings \***

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 2409 2013-06	Paints and varnishes - Cross-cut test
DIN EN ISO 2815 2003-10	Paints and varnishes – Buchholz indentation test
DIN EN ISO 4624 2016-08	Paints and varnishes – Pull-off test for adhesion
DIN EN ISO 6272-1 2011-11	Paints and varnishes – Rapid-deformation (impact resistance) tests – Part 1: Falling-weight test, large-area indenter
DIN EN ISO 6272-2 2011-11	Paints and varnishes – Rapid-deformation (impact resistance) tests – Part 2: Falling-weight test, small-area indenter
DIN EN ISO 6860 2006-06	Paints and varnishes – Bend test (conical mandrel)
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
ASTM D 522 1993	Standard Test Methods for Mandrel Bend Test of Attached Organic Coatings

Valid from: 06.12.2024  
Date of issue: 14.03.2025

**Annex to the Accreditation Certificate D-PL-11086-01-00**

ASTM D 2794  
2019 Standard Test Method for Resistance of Organic Coatings to the Effects of Rapid Deformation

BS ISO 18771  
2019-02 Anodizing of aluminium and its alloys – Method to test the surface abrasion resistance using glass-coated abrasive paper

**3 Visual inspection of coating damage and changes\***

DIN EN ISO 4628-2  
2016-07 Paints and varnishes – Evaluation of degradation of coatings – Designation of quantity and size of defects, and of intensity of uniform changes in appearance – Part 2: Assessment of degree of blistering

DIN EN ISO 4628-3  
2016-07 Paints and varnishes – Evaluation of degradation of coatings – Designation of quantity and size of defects, and of intensity of uniform changes in appearance – Part 3: Assessment of degree of rusting

DIN EN ISO 4628-4  
2016-07 Paints and varnishes – Evaluation of degradation of coatings – Designation of quantity and size of defects, and of intensity of uniform changes in appearance – Part 4: Assessment of degree of cracking

DIN EN ISO 4628-5  
2016-07 Paints and varnishes – Evaluation of degradation of coatings – Designation of quantity and size of defects, and of intensity of uniform changes in appearance – Part 5: Assessment of degree of flaking

DIN EN ISO 4628-6  
2011-12 Paints and varnishes – Evaluation of degradation of coatings – Designation of quantity and size of defects, and of intensity of uniform changes in appearance – Part 6: Assessment of degree of chalking by tape method

DIN EN ISO 4628-8  
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

Valid from: 06.12.2024

Date of issue: 14.03.2025

**Annex to the Accreditation Certificate D-PL-11086-01-00**

ISO 105-A02  
1993-09                      Tests for colour fastness –  
Part A02: Grey scale for assessing change in colour

**4                      Analyses of optical properties\***

ISO 7724-2  
1984-10                      Paints and varnishes – Colorimetry –  
Part 2: Colour measurement

DIN EN ISO 2813  
2015-02                      Paints and varnishes –  
Determination of gloss value at 20°, 60° and 85°

DIN EN ISO/CIE 11664-4  
2020-03                      Colorimetry - Part 4: CIE 1976 L\*a\*b\* colour space

**5                      Determination of coating thicknesses and the apparent conductance of coatings\***

DIN EN ISO 1463  
2021-08                      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  
base metals - Measurement of coating thickness - Amplitude-  
sensitive eddy-current method

DIN EN ISO 2808  
2019-12                      Paints and varnishes - Determination of film thickness

DIN EN ISO 2931  
2018-04                      Anodizing of aluminium and its alloys - Assessment of quality of  
sealed anodic oxidation coatings by measurement of admittance

**6                      Testing the resistance of coatings and plastics to artificial irradiation or weathering \*\***

DIN EN ISO 4892-2  
2021-11                      Plastics - Methods of exposure to laboratory light sources -  
Part 2: Xenon-arc lamps

DIN EN ISO 4892-3  
2016-10                      Plastics - Methods of exposure to laboratory light sources -  
Part 3: Fluorescent UV lamps

DIN EN ISO 16474-2  
2022-11                      Paints and varnishes - Methods of exposure to laboratory light  
sources - Part 2: Xenon-arc lamps

Valid from:                      06.12.2024

Date of issue:                      14.03.2025

**Annex to the Accreditation Certificate D-PL-11086-01-00**

DIN EN ISO 16474-3 2021-04	Paints and varnishes - Methods of exposure to laboratory light sources - Part 3: Fluorescent UV lamps
DIN EN ISO 105-B02 2014-11	Tests for colour fastness - Part B02: Colour fastness to artificial light: Xenon arc fading lamp test

**7 Environmental testing of coatings against temperature, humidity and corrosion using condensation, salt spray and sulphur dioxide \*\***

DIN EN IEC 60068-2-52 2018-08	Environmental testing - Part 2-52: Tests - Test Kb: Salt mist, cyclic (sodium chloride solution)
DIN EN ISO 9227 2023-03	Corrosion tests in artificial atmospheres - Salt spray tests
DIN 50018 2013-05	Testing in a saturated atmosphere in the presence of sulfur dioxide
DIN EN ISO 3231 1998-02	Paints and varnishes - Determination of resistance to humid atmospheres containing sulfur dioxide
ISO 22479 2019-05	Corrosion of metals and alloys - Sulfur dioxide test in a humid atmosphere (fixed gas method)
DIN EN ISO 4623-2 2016-12	Paints and varnishes - Determination of resistance to filiform corrosion - Part 2: Aluminium substrates
DIN EN ISO 12944-6 2018-06	Paints and varnishes - Corrosion protection of steel structures by protective paint systems - Part 6: Laboratory performance test methods
DIN EN ISO 12944-9 2018-06	Paints and varnishes - Corrosion protection of steel structures by protective paint systems - Part 9: Protective paint systems and laboratory performance test methods for offshore and related structures
DIN EN ISO 11997 2018-01	Paints and varnishes - Determination of resistance to cyclic corrosion conditions - Part 1: Wet (salt fog)/dry/humid
DIN EN ISO 6270-1 2018-04	Paints and varnishes - Determination of resistance to humidity - Part 1: Condensation (single-sided exposure)

Valid from: 06.12.2024

Date of issue: 14.03.2025

**Annex to the Accreditation Certificate D-PL-11086-01-00**

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)
VDA 621-415 1982-02	Testing of corrosion protection of automotive paintwork under cyclically changing stress
SAE J 2334 2003-12	Laboratory Cyclic Corrosion Test

**8 Tests on coatings in accordance with the quality mark \***

QIB Rev. 15 2019-11	Regulations for obtaining the quality marks for industrial coating by cathodic electrodeposition, powder coating and liquid coating
GRM-Prüfrichtlinien 2019-10	Test guidelines of the Gütegemeinschaft Reinigung von Fassaden e.V. on the quality and testing regulations (GPB)
QUALICOAT Specifications 2021-01	Specifications for a quality label for liquid and powder coatings on aluminium for architectural applications
GSB AL 631-7 / ST 663-7 2020-07	International Quality Regulations for the Coating of Building Components

**9 Tests on coatings and components according to manufacturer specifications**

DBL 1750 2023-08	Aluminum Parts with Anodic Oxide Layers
DBL 7381 2023-12	Organic coating for metallic parts on the outer side and underside of the vehicle and in the engine compartment
DBL 7382 2020-12	Supply specification – Coating/Painting of Metallic Parts in Vehicle interior
DBL 8451 2019-06	Electrodeposited Zinc and Zinc Alloy Coatings for Components Manufactured from Ferrous Materials
DBL 9440 2019-12	Fasteners with metric thread – Surface protection and supplementary technical delivery conditions
MBN 10494-5 2023-10	Paint Test Methods – Part 5: Technical-Mechanical Tests

Valid from: 06.12.2024

Date of issue: 14.03.2025

**Annex to the Accreditation Certificate D-PL-11086-01-00**

MBN 10494-6 2021-03	Paint Test Methods – Part 6: Climatic Tests
GS 90010-1 2023-05	Surface protection classes for metallic materials – Metallic coatings and inorganic coating systems – Standard parts and standard-like drawing parts
GS 90010-2 2021-03	Surface protection classes for metallic materials – Metallic coatings and inorganic coating systems – Drawing parts (structural components)
BMW AA-0235 2019-09	Accelerated weathering crack stability
STD 423-0014 2015-01	Accelerated corrosion test – Atmospheric corrosion
STD 423-0069 2019-10	Accelerated corrosion test, version II (ACT II) – Cyclic atmospheric corrosion test with salt load
TL 182 2020-09	Duplex Coating on Aluminum Parts – Surface Protection Requirements
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
TL 227 2022-02	Single-Layer Paint Coating of Zinc-Coated Metal Surfaces – Surface Protection Requirements
TL 244 2024-02	Zinc/Nickel Alloy Coatings – Surface Protection Requirements
TL 256 2022-03	Powder Coating on Metal Surfaces – Surface Protection Requirements
TL 52451 2019-04	Paintwork of Decorative Metallic Add-on Parts on the Exterior – Requirements
PTL 5536 2018-10	Surface Decors of Vehicle Interiors – Varnishes / Printing / Foils / Thin-film Systems – Requirements and Tests

Valid from: 06.12.2024

Date of issue: 14.03.2025



**Annex to the Accreditation Certificate D-PL-11086-01-00**

PTL 8140 2020-02	Interior – Parts and Their Surfaces – Requirements and Tests
PV 1200 2022-11	Vehicle Parts – Testing the Environmental Cycle Resistance (80 °C/-40 °C)
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
PV 2005 2021-06	Vehicle Parts – Environmental Cycle Resistance Testing of Special Parts, New Developments, and Solutions
DBS 918300 2017-01	Coating materials for rail vehicles
DBS 918340 2019-03	Powder coater for exterior and interior parts of rail vehicles

**Annex to the Accreditation Certificate D-PL-11086-01-00**

**Abbreviations used:**

ASTM	American Society for Testing and Materials
BS	British Standard
BMW AA	Bayerische Motoren Werke test instruction
CIE	International Commission on Illumination
DBL	Daimler-Benz Company Standard
DBS	Deutsche Bahn Standard
DIN	German Institute for Standardization
EN	European Standard
GS	Bayerische Motoren Werke delivery conditions
GSB	Gütegemeinschaft für die Stückbeschichtung von Bauteilen e. V.
GRM	Gütegemeinschaft Reinigung von Fassaden e. V.
IEC	International Electrotechnical Commission
ISO	International Organization for Standardisation
MBN	Mercedes-Benz Company Standard
PTL	Porsche technical delivery conditions
PV	Volkswagen Test instruction
QIB	Qualitätsgemeinschaft Industriebeschichtung e. V.
SAE	Society of Automotive Engineers
STD	Standard of Volvo Group
TL	Volkswagen technical delivery conditions
VDA	Verband der Automobilindustrie

Valid from: 06.12.2024

Date of issue: 14.03.2025

**Page 10 of 10**

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