Deutsche Akkreditierungsstelle

Annex to the Partial Accreditation Certificate
D-PL-11140-07-01
according to DIN EN ISO/IEC 17025:2018

Valid from: **29.11.2023**

Date of issue: 29.11.2023

This annex is a part of the accreditation certificate D-PL-11140-07-00.

Holder of partial Accreditation Certificate:

**Fraunhofer Gesellschaft zur Förderung der angewandten Forschung
eingetragener Verein
Hansastraße 27c, 80686 Munich, Germany**

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**Fraunhofer Gesellschaft zur Förderung der angewandten Forschung
eingetragener Verein
Fraunhofer Institute for Manufacturing Engineering and Automation IPA
Nobelstraße 12, 70569 Stuttgart, Germany**

The testing laboratory meets the minimal requirements of DIN EN ISO/IEC 17025:2018 and, if applicable, additional legal and normative requirements, including those in relevant sectoral schemes, in order to carry out the conformity assessment activities listed below.

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

Testing in the fields of:

Material tests on paint raw materials, coating materials, coatings and coated surfaces

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

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1   Corrosion and climatic tests *

Type of test	Measured variables / test parameters	Test methods (characteristic)
Corrosion resistance	temperature, relative humidity, salt spray mist collection rate, salt spray mist concentration, pH-value, damage and intensity of changes	DIN EN ISO 9227 DIN EN ISO 11997-1
Resistance to humidity	temperature, relative humidity, damage and intensity of changes	DIN EN ISO 6270-1 DIN EN ISO 6270-2
Resistance to artificial weathering (xenon-arc lamp)	temperature, relative humidity, irradiance, damage and intensity of changes	DIN EN ISO 105-B06 DIN EN ISO 16474-2

2   Mechanical testing of coated surfaces *

Type of test	Measured variables / test parameters	Test methods (characteristic)
Abrasion resistance to rubbing by fingers and hands	hardness, speed, force, time, damage and intensity of changes	DIN EN 60068-2-70
Scratch resistance and abrasion resistance (spring-loaded pen, laboratory-scale car-wash, crockmeter)	speed, force, rotational speed, time, frequency, flow rate, gloss changes, surface changes	DIN EN ISO 22557 DIN EN ISO 21546 DIN EN ISO 20566 DIN EN ISO 105-X12
Determination of adhesive strength – cross-cut test, multi-impact testing, pressure water jet	time, pressure, length, mass, flow rate, temperature, damage and intensity of changes	DIN EN ISO 2409 DIN EN ISO 20567-1 DIN EN ISO 16925

3   Tests for paint wetting impairment substances *

Type of test	Measured variables / test parameters	Test methods (characteristic)
Testing for paint wetting impairment substances	paint wetting impairments	VDMA specification 24364

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4 Optical tests *

Type of test	Measured variables / test parameters	Test methods (characteristic)
Determination of color and color differences	color values, color changes	DIN 53236
Visual evaluation of degradation of coatings	damage and intensity of changes	DIN EN ISO 4628-1, -2, -3, -4, -8, -10
Visual comparison of color	color deviation	DIN EN ISO 3668
Determination of gloss value	gloss value (20°, 60°, 85° measurement angle)	DIN EN ISO 2813

5 Coating thickness measurements *

Type of test	Measured variables / test parameters	Test methods (characteristic)
Measurement of coating thickness (magnetic method, amplitude-sensitive eddy current method)	total coating thickness	DIN EN ISO 2178 DIN EN ISO 2360
Measurement of coating thickness (cross-grind-/cross-cut-method)	layer structure, individual layer thickness	DIN EN ISO 2808

6 Media resistance tests *

Type of test	Measured variables / test parameters	Test methods (characteristic)
Media resistance	damage and intensity of changes	DIN EN ISO 2812-3 DIN EN ISO 2812-4

7 Determination of fogging behavior *

Type of test	Measured variables / test parameters	Test methods (characteristic)
Determination of fogging behavior	temperature, mass of condensable component	DIN 75201

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8 Determination of burning behavior *

Type of test	Measured variables / test parameters	Test methods (characteristic)
Determination of burning behavior	time, length, burn rate	DIN 75200

9 Determination of the odor behavior *

Type of test	Measured variables / test parameters	Test methods (characteristic)
Determination of odor characteristics	Odor grades	VDA 270

10 Selected analytical tests

SAA AS 01.0
2020-10

Identification of binder type by infrared (IR) spectroscopy

SAA AS 03.0
2019-12

Determination of glass transition temperature and melting point by Differential Scanning Calorimetry (DSC)

Abbreviations:

DIN	German Institute for Standardization
EN	European Standard
IEC	International Electrotechnical Commission
ISO	International Organization for Standardization
SAA	Standard operation procedure of Fraunhofer IPA
VDA	German Association of the Automotive Industry
VDMA	German Engineering Federation

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