

Deutsche Akkreditierungsstelle

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

Valid from: 26.10.2022

Date of issue: 26.10.2022

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 27 c, 80686 München**

with its testing laboratory

**Fraunhofer Institut für Produktionstechnik und Automatisierung IPA
Nobelstraße 12, 70569 Stuttgart**

at the locations

**Nobelstraße 12, 70569 Stuttgart (Reinheitstechnik, Nassapplikations- und
Simulationstechnik, Lackierprozessentwicklung)
Allmandring 37, 70569 Stuttgart (Analytik und Stoffprüfungen, Lackchemische
Anwendungstechnik)**

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.

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>.

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Tests in the fields:

Corrosion, climatic, physical, layer thickness and resistance tests on coated materials; determination of parameters for raw paint materials, coating materials, coatings, plastics, polymers and material surfaces, e. g. within the scope of failure analyses; determination of fogging and odour characteristics, as well as burning behavior of materials for the interior of motor vehicles; selected analytical and application test methods for surface, paint and coating technology; analysis of Technical Cleanliness; determination of the toxicity of products from research and industry with biological test methods

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

The standards are labeled with the following abbreviations that indicate on which locations they are performed:

A
Allmandring 37

N
Nobelstraße 12

1 Corrosion and climatic tests *

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	N
DIN EN ISO 16474-2 2014-03	Paints and varnishes - Methods of exposure to laboratory light sources - Part 2: Xenon-arc lamps, method A	N
DIN EN ISO 6270-1 2018-04	Paints and varnishes - Determination of resistance to humidity - Part 1: Condensation (single-sided exposure)	A
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)	A / N
DIN EN ISO 9227 2017-07	Corrosion tests in artificial atmospheres - salt spray tests <i>(alternative: with neutral sodium chloride solution (NSS method))</i>	A
DIN EN ISO 11997-1 2018-01	Paints and varnishes - Determination of resistance to cyclic corrosion conditions - Part 1: Wet (salt fog)/dry/humid, cycle B	A

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2 Physical tests *

DIN 53236 2018-02	Colouring materials - Conditions of measurement and evaluation for the determination of colour differences for paint coatings, similar coatings and plastics, method B	N
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	N
DIN EN ISO 2409 2020-12	Paints and varnishes - Cross-cut test	A / N
DIN EN ISO 2813 2015-02	Paints and varnishes - Determination of gloss value at 20°, 60° and 85°	N
DIN EN ISO 3668 2020-05	Paints and varnishes - Visual comparison of colour of paints	N
DIN EN ISO 16925 2014-06	Paints and varnishes - Determination of the resistance of coatings to pressure water-jetting	N
DIN EN ISO 20567-1 2017-07	Paints and varnishes - Determination of stone-chip resistance of coatings - Part 1: Multi-impact testing	N
DIN EN ISO 22557 2021-02	Paints and varnishes - Scratch test using a spring-loaded pen	N
VDMA Specification 24364 2018-05	Testing for paint wetting impairment substances (LABS conformity)	N

3 Measurement of coating thickness *

DIN EN ISO 2178 2016-11	Non-magnetic coatings on magnetic substrates - Measurement of coating thickness - Magnetic method	A
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	A
DIN EN ISO 2808 2019-12	Paints and varnishes - Determination of film thickness (here: <i>section 5.4.4 method 6A - Cross-grind/Cross-cut method</i>)	N

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4 Resistance tests *

DIN EN ISO 2812-3 2019-08	Paints and varnishes - Determination of resistance to liquids - Part 3: Method using an absorbent medium	N
DIN EN ISO 2812-4 2018-03	Paints and varnishes - Determination of resistance to liquids - Part 4: Spotting methods	N
DIN EN ISO 20566 2021-06	Paints and varnishes - Determination of the scratch resistance of a coating system using a laboratory-scale car-wash	N
DIN EN ISO 21546 2021-02	Paints and varnishes - Determination of the resistance to rubbing using a linear abrasion tester (crockmeter)	N
DIN EN ISO 105-X12 2016-11	Textiles - Tests for colour fastness - Part X12: Colour fastness to rubbing	N

5 Determination of fogging characteristics *

DIN 75201 2011-11	Determination of the fogging characteristics of trim materials in the interior of automobiles	N
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6 Determination of burning behavior *

DIN 75200 1980-09	Determination of burning behaviour of interior materials in motor vehicles	N
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7 Determination of odour characteristics *

VDA 270 2018-06	Determination of the odour characteristics of trim materials in motor vehicles	N
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8 Determination of the toxicity of products from research and industry with biological test methods *

DIN EN ISO 10993-5 2009-10	Biological evaluation of medical devices - Part 5: Tests for in vitro cytotoxicity <i>(here without conformity assessment for medical devices)</i>	N
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9 Analysis of Technical Cleanliness *

ISO 16232 2018-12	Road vehicles - Cleanliness of components and systems, 9.2.3 Light-optical analysis	N
VDA Volume 19 2015-03	Inspection of Technical Cleanliness, Part 1, 8.2.2 Light-optical analysis	N

10 Selected analytical tests

SAA AS 01.0 2020-10	Identification of the binder type by IR Spectroscopy	A
SAA AS 03.0 2019-12	Determination of glass transition temperature and melting point by Differential Scanning Calorimetry (DSC)	A

abbreviations used:

DIN	German Institute for Standardization
EN	European Standard
IEC	International Electrotechnical Commission
ISO	International Organization for Standardization
SAA	Standard operating procedure of Fraunhofer IPA, Department Coating Systems and Painting Technology
VDA	German Association of the Automotive Industry (<i>German: Verband der Automobilindustrie</i>)
VDMA	German Engineering Federation (<i>German: Verband Deutscher Maschinen- und Anlagenbau</i>)