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Deutsche
Akkreditierungsstelle

# Accreditation

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

**Atotech Deutschland GmbH & Co. KG**
**Erasmusstraße 20, 10553 Berlin**

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-14564-01-01**
**D-PL-14564-01-02**
**D-PL-14564-01-03**

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-14564-01-00**

Berlin, 08.05.2024
Dr. rer. nat. Olga Lettau
Head of Technical Unit

Translation issued:
28.05.2024
Dr. rer. nat. Olga Lettau
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

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## Annex to the Accreditation Certificate D-PL-14564-01-00 according to DIN EN ISO/IEC 17025:2018

**Valid from:** **08.05.2024**

Date of issue: 08.05.2024

Holder of accreditation certificate:

**Atotech Deutschland GmbH & Co. KG**
**Erasmusstraße 20, 10553 Berlin**

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 in the annexes to the partial accreditation certificates listed below.

**D-PL-14564-01-01**

**D-PL-14564-01-02**

**D-PL-14564-01-03**

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# Accreditation

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

**Atotech Deutschland GmbH & Co. KG**
**Erasmusstraße 20, 10553 Berlin**

meets the requirements according to DIN EN ISO/IEC 17025:2018 for the conformity assessment activities listed in the annex to this certificate. This includes additional existing legal and normative requirements for the testing laboratory, including those in relevant sectoral schemes, provided they are explicitly confirmed in the annex to this certificate.

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This partial accreditation certificate only applies in connection with the notice of 08.05.2024 with accreditation number D-PL-14564-01-00.
It consists of this cover sheet, the reverse side of the cover sheet and the following annex with a total of 9 pages.

Registration number of the partial accreditation certificate: **D-PL-14564-01-01**
It is a part of the accreditation certificate: D-PL-14564-01-00.

Berlin, 08.02.2022 — Dr. rer. nat. Olga Lettau, Head of Technical Unit

Translation issued: 28.05.2024 — Dr. rer. nat. Olga Lettau, Head of Technical Unit

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# Deutsche Akkreditierungsstelle

# Annex to the Partial Accreditation Certificate D-PL-14564-01-01 according to DIN EN ISO/IEC 17025:2018

**Valid from:** **08.05.2024**

Date of issue: 08.05.2024

This annex is a part of the accreditation certificate D-PL-14564-01-00.

Holder of partial accreditation certificate:

**Atotech Deutschland GmbH & Co. KG**
**Erasmusstraße 20, 10553 Berlin**

with the locations

**Atotech Deutschland GmbH & Co. KG**
**Analytics und Materials Science**
**Erasmusstraße 20, 10553 Berlin**

**Atotech Deutschland GmbH & Co. KG**
**Analytics und Materials Science**
**Analytiklabor**
**Ahornallee 4, 16818 Werder**

**Atotech Deutschland GmbH & Co. KG**
**Analytics und Materials Science**
**Untergasse 47, 65468 Trebur-Geinsheim**

*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

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.

Examinations in the areas:

**Chemical analysis of industrial chemicals, salt solutions, metal solutions and electroplating baths using chromatographic, spectrometric and titrimetric methods;**

**Within the test areas marked with **, the testing laboratory is permitted to modify, further develop and develop new test methods without having to inform and obtain prior approval from DAkkS.**

**The testing laboratory at the Werder (Neuruppin) site is permitted to use in-house procedures of the Berlin site in the test areas 2.1, 2.3 - 2.7 and 2.9 - 2.10 without the need for prior information and approval by DAkkS.**

**The test methods listed are examples.**

**The testing laboratory is permitted to use the standardized or equivalent test methods listed here with different issue statuses without having to inform and obtain prior approval from DAkkS.**

**The testing laboratory has an up-to-date list of all test methods in the flexible accreditation area.**

The test methods are marked with the following symbols for the locations at which they are carried out.

The marking B (Berlin), NP (Werder) and TR (Trebur-Geinsheim) after the test and sampling procedures indicates the location for which the competence is confirmed.
B = Atotech Deutschland GmbH & Co. KG, Berlin
NP = Atotech Deutschland GmbH & Co. KG, Werder (Neuruppin)
TR = Atotech Deutschland GmbH & Co. KG, Trebur

## 1 Metallic layers and Coatings

| | | |
|---|---|---|
| DIN EN ISO 3613<br>2011-04 | Metallic and other inorganic coatings - Chromate conversion coatings on zinc, cadmium, aluminum-zinc alloys and zinc-aluminum alloys - Test methods | B, TR |
| DIN EN 1811<br>2015-10 | 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 | B |
| DIN EN 62321<br>2009-12;<br>VDE 0042-1<br>2009-12 | Electrotechnical products - Determination of levels of six regulated substances (lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls, polybrominated diphenyl ethers)<br>(*Deviation: only for lead, chromium, cadmium and hexavalent chromium*) | B, TR |
| DIN EN 62321-3-1<br>2014-10;<br>VDE 0042-1-3-1<br>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 | B |
| DIN EN 62321-5<br>2014-10;<br>VDE 0042-1-5<br>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<br>(*Deviation: only ICP-OES*) | B, TR |
| DIN EN 62321-7-1<br>2016-09;<br>VDE 0042-1-7-1<br>2016-09 | Determination of certain substances in electrotechnical products - Part 7-1: Determination of the presence of hexavalent chromium (Cr(VI)) in colorless and colored corrosion-protected coatings on metals by the colorimetric method | B, TR |

## 2 Analyses of industrial chemicals

### 2.1 Titrimetric determination of elements and anions in salt solutions, metal solutions and electroplating baths (** B und TR)

| | | |
|---|---|---|
| AV-A0000364<br>2018-10 | Determination of nickel in nickel electrolytes by complexometry | B, NP |
| AV-A0000410<br>2015-06 | Determination of copper in copper electrolytes by complexometry | B, NP |
| AV-A0000350<br>2011-03 | Determination of Cr(VI) in chrome electrolytes and etches by redox titration | B, NP |
| AV-A0000430<br>2010-12 | Determination of Cr(VI) in chrome electrolytes and etches by redox titration | B |
| PV-11321TIT<br>2009-01 | Determination of Sn(II) in activators by redox titration | B, NP |
| AV-A0000082<br>2011-03 | Determination of sodium hypophosphite in nickel electrolytes by redox titration | B, NP |
| AV-A0000480<br>2018-10 | Determination of chloride in nickel electrolytes by precipitation titration | B, NP |
| AV-A0000353<br>2011-03 | Determination of chloride in acid zinc electrolytes by precipitation titration | B, NP, TR |
| AV-A0000412<br>2018-10 | Determination of chloride in acid copper electrolytes by precipitation titration | B, NP |
| AV-A0000026<br>2013-12 | Determination of sulfuric acid in copper electrolytes by alkalimetry | B, NP |
| AV-A0000352<br>2018-10 | Determination of boric acid in zinc- or nickel electrolytes by alkalimetry | B, NP, TR |
| AV-A0000398<br>2019-08 | Determination of sodium hydroxide in zinc- or zinc/nickel electrolytes by acidimetry | B, NP, TR |
| AV-A0001447<br>2018-03 | Determination of wetting agent in cleaner by surfactant-titration | B |
| PV-9289-TIT<br>2017-02 | Determination of wetting agent in conditioner by surfactant-titration | B |

| | | |
|---|---|---|
| AV-A0000284<br>2011-06 | Determination of total acid in tin electrolytes by alkalimetry | NP |

## 2.2 Determination of organic substances in salt solutions, metal solutions and electroplating baths using gas chromatography with standard detector (FID) **

| | | |
|---|---|---|
| PV-10595GC<br>2019-01 | Ethylene glycol and diethylene glycol monobutyl ether (Butyldiglycol) in sweller by GC-FID | B |
| PV-14215GC<br>2019-01 | Diethylene glycol monobutyl ether in etch cleaner by GC-FID | B |

## 2.3 Determination of organic and inorganic substances in salt solutions, metal solutions and electroplating baths using ion chromatography (** B)

| | | |
|---|---|---|
| PV-9796-IC<br>2019-07 | Determination of hypophosphite and methane sulfonic acid in tin-electrolytes by ion chromatography | B, NP |
| AV-A0000447<br>2018-09 | Determination of chloride, sulfate, nitrate, phosphate and catalyst C in chrome-electrolytes by ion chromatography | B, NP |
| PV 13832IC<br>2015-03 | Determination of catalyst N and T in chrome additive by ion chromatography | B, NP |
| AV-A0002346<br>2019-07 | Determination of stabilizer C1 und C2, BluCr B and sulfate in tri-chrome electrolyte by ion chromatography | B |
| AV-A0002741<br>2016-10 | Determination of ammonium in treated rinse water by cation-IC | B |
| PV-13016IC<br>2017-12 | Determination of complexer in palladium electrolytes by cation-IC | B |
| AV-B0002064<br>2018-09 | Determination of nitrate in nickel electrolytes by IC-UV | B |
| PV-12957IC<br>2015-06 | Determination of nitrate in copper additives by IC-UV | B |

## 2.4 Determination of organic substances in salt solutions, metal solutions and electroplating baths using liquid chromatography with standard detectors (UV, CA, RI, ELS) (** B und TR)

| | | |
|---|---|---|
| PV-12574LC<br>2010-09 | Determination of complexing agents in nickel concentrate by LC-UV | B, NP |
| PV-11011LC<br>2017-04 | Determination of brightener in copper concentrate by LC-U | B, NP |
| AV-B0000444<br>2010-06 | Determination of complexing agents in nickel electrolytes by LC-UV | B, NP |
| AV-B0001719<br>2019-07 | Determination of wetting agents in nickel electrolytes by LC-CAD | B |
| AV-A0003069<br>2018-01 | Determination of carrier in zinc/nickel electrolytes by LC-CAD | B, TR |
| AV-B0002095<br>2019-03 | Determination of carrier in zinc/nickel electrolytes by LC-UV | B, TR |
| AV-A0002464<br>2016-10 | Determination of Neolink E3 in copper electrolytes by LC-RI | B |
| AV-B0001325<br>2017-11 | Determination of polymers in tin/silver electrolytes by LC-ELSD | B |
| EPA 8315A (SW-846)<br>1996-12 | Determination of Carbonyl Compounds by High Performance Liquid Chromatography (HPLC)<br>(Deviation: *only for formaldehyde and derivatization according 7.3.1 or 7.3.4*) | B |

## 2.5 Determination of elements and anions in salt solutions, metal solutions, electroplating baths and waters using photometry (** B und TR)

| | | |
|---|---|---|
| AV-B0000831<br>2007-09 | Determination of nitrate in nickel electrolytes by photometry | B, NP, TR |
| PV-14363UV<br>2014-07 | Determination of stabilizer in copper concentrates by photometry | B, NP |
| AV-A0001866<br>2013-01 | Determination of ammonium in acid zinc or tri-chrome electrolytes by photometry | B, TR |

| | | |
|---|---|---|
| AV-A0000283<br>2001-09 | Determination of thiourea in tin electrolytes by photometry | B, NP, TR |

## 2.6 Determination of elements in salt solutions, metal solutions, electroplating baths and waters using atomic absorption spectrometry (AAS) (** B und TR)

| | | |
|---|---|---|
| AV-A0001757<br>2014-05 | Determination of iron in chrome electrolytes by F-AAS | B |
| AV-A0000170<br>2015-11 | Determination of nickel in Zn/Ni electrolytes by F-AAS | B, NP, TR |
| AV-A0000171<br>2015-11 | Determination of zinc in Zn/Ni electrolytes by F-AAS | B, NP, TR |
| AV-A0000156<br>2010-11 | Determination of palladium in activators by F-AAS | B, NP |
| PV-14544AAS<br>2017-01 | Determination of gold in raw materials by F-AAS | B, NP |
| PV-15606AAS<br>2018-05 | Determination of sodium and potassium in e`less copper additives by F-AES | B, NP |

## 2.7 Determination of elements in salt solutions, metal solutions, electroplating baths and waters using inductive coupled plasma atomic emission spectrometry (ICP-OES) (** B und TR)

| | | |
|---|---|---|
| PV-10348ICP<br>2006-01 | Determination of As, Ca, Cr, Mg, Ni, Pb, Sb, Sn in copper concentrates by ICP-OES | B, NP |
| PV-14589ICP<br>2014-12 | Determination of iron in reduction solutions by ICP-OES | B, NP |
| AV-B0000340<br>2019-09 | Semiquantitative screening of 47 elements in metal salt solutions by ICP-OES | B, NP, TR |
| PV-14511ICP<br>2014-10 | Determination of Ag, As, Cd, Co, Cr, Fe, In, Mg, Mn, Ni, Pb, Sn, Tl, Zn in copper additive by ICP - OES | B, NP, TR |
| PV-14043ICP<br>2017-08 | Determination of Pt, Rh, Ru in palladium stock solutions by ICP - OES | B |

| | | |
|---|---|---|
| PV-11069ICP 2018-08 | Determination of Ca, Cr, Cd, Mg, Ni, Pb, As, Sb, Sn in copper bases electrolytes by ICP-OES | B, NP |
| PV-14872ICP 2019-06 | Determination of K, Ca, Mg, Cr, Ni, As, Sb, Sn in organic additives for copper electrolytes by ICP-OES | B, NP |

## 2.8 Determination of elements in salt solutions, metal solutions, electroplating baths and ultrapure water using inductive coupled plasma mass spectrometry (ICP-MS) **

| | | |
|---|---|---|
| PV-15526PMS 2018-05 | Al, Ag, As, Ba, Ca, Cd, Co, Cr, Fe, Li, In, Mg, Mn, Pb, Sn, Si, Sr, Ti, V, W and Zn in e`less copper additives by ICP-MS | B |
| AV-A0002902 2017-12 | Ag, As, Bi, Cd, Fe, Ni, P, Pb, S, Sb, Se, Sn, Te und Zn in copper anodes by ICP-MS | B |

## 2.9 Determination of elements and organic substances in salt solutions, metal solutions and electroplating baths using electro-chemical analysis (** B)

| | | |
|---|---|---|
| AV-A0001611 2011-12 | Determination of Pb and Cd in nickel electrolytes by polarography | B, NP |
| AV-A0002353 2015-11 | Determination of Bi in nickel electrolytes by polarography | B, NP |
| PV-14659POL 2015-10 | Determination of Sn(II) in colloid Sn/Pd activators by polarography | NP |
| AV-A0001742 2012-01 | Determination of leveler in copper-electrolytes by voltammetry | B, NP |
| AV-A0001741 2012-03 | Determination of brightener in copper electrolytes by voltammetry | B, NP |
| PV-9666-CVS 2019-05 | Determination of brightener activity in organic additives by voltammetry | B, NP |
| PV-9659-CVS 2019-05 | Determination of leveler activity in organic additives by voltammetry | B, NP |
| AV-A0000787 2018-08 | Determination of correction solution in copper electrolytes by voltammetry | B, NP |

## 2.10 Physical and physico-chemical analyses of raw materials, salt solutions, metal solutions and electroplating baths (** B und TR)

| | | |
|---|---|---|
| PV-5360-PHY 2008-06 | Determination of density - oscillating U-tube principle | B, NP, TR |
| PV-5686-PHY 2019-01 | Determination of pH value | B, NP, TR |

**Abbreviations used:**

| | |
|---|---|
| AV | In-house method of ATOTECH Deutschland GmbH & Co. KG |
| DIN | German Institute for Standardization |
| EN | European Norm |
| IEC | International Electrotechnical Commission |
| ISO | International Organization for Standardization |
| PV | In-house method of ATOTECH Deutschland GmbH & Co. KG |

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# Accreditation

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This partial accreditation certificate only applies in connection with the notice of 08.05.2024 with accreditation number D-PL-14564-01.
It consists of this cover sheet, the reverse side of the cover sheet and the following annex with a total of 5 pages.

Registration number of the partial accreditation certificate: **D-PL-14564-01-02**
It is a part of the accreditation certificate: D-PL-14564-01-00.

Berlin, 08.05.2024 Dr. Joachim Kintrup
Head of Technical Unit

Translation issued:
28.05.2024 Dr. Joachim Kintrup
Head of Technical Unit

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**Valid from:** **08.05.2024**

Date of issue: 08.05.2024

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Holder of partial accreditation certificate:

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with the locations

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Deutsche Akkreditierungsstelle

Examinations in the areas:

**Physical, physico-chemical and chemical analysis of process water and waste water;**
**Sampling of waste water;**

**The testing laboratory is permitted to use the standardized or equivalent test methods listed here with different issue statuses without having to inform and obtain prior approval from DAkkS.**
**The test methods listed are examples.**

**The testing laboratory has an up-to-date list of all test methods in the flexible accreditation area.**

The test procedures are marked with the following symbols of the locations where they are carried out.

The marking B (Berlin), NP (Werder) and TR (Trebur-Geinsheim) after the test and sampling methods indicates the location for which the competence is confirmed.
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NP = Atotech Deutschland GmbH & Co. KG, Werder (Neuruppin)
TR = Atotech Deutschland GmbH & Co. KG, Trebur

## 1 Analyses of process water and waste water

### 1.1 Sampling and sample preparation

| | | |
|---|---|---|
| DIN 38402-A 11<br>2009-02 | Sampling of waste water | B, TR |
| DIN EN ISO 5667-3 (A 21)<br>2019-07 | Water quality - Sampling - Part 3: Guidance on the preservation and handling of water samples | B, TR |
| DIN 38402-A 30<br>1998-07 | Pretreatment, homogenization and aliquotation of non-homogeneous water samples | B, TR |

### 1.2 Physical and physico-chemical parameters

| | | |
|---|---|---|
| DIN EN ISO 10523 (C 5)<br>2012-04 | Water quality - Determination of pH value | B, NP, TR |
| DIN EN 27888 (C 8)<br>1993-11 | Water quality - Determination of electrical conductivity | B, NP, TR |

### 1.3 Anions

| | | |
|---|---|---|
| DIN EN ISO 10304-1 (D 20)<br>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 | B, NP |
| DIN 38405-D 24<br>1987-05 | Photometric determination of chromium(VI) using 1,5-diphenylcarbonohydrazide | B, TR |
| DIN 38405-D 27<br>2017-10 | Determination of sulfide by gas extraction method<br>(Deviation: *only the procedure DIN 38405 - D 27-1 Determination of easily liberatable sulfide*) | B |
| Hach LCK 315<br>2013-04 | Cyanide cuvette test, 0.01-0.6 mg/L CN<br>(LCK 315)<br>(Deviation: *only easily liberatable cyanide)* | B, NP, TR |
| Hach LCK 313<br>2019-10 | Chromium (III und VI) cuvette test, 0.03-1.0 mg/L Cr<br>(LCK 313) | TR |
| Hach LCK 353<br>2019-10 | Sulfate cuvette test, 150-900 mg/L $SO_4$<br>(LCK 353) | NP |

| | | |
|---|---|---|
| Hach LCK 350<br>2019-03 | Phosphate (ortho/total) cuvette test, 2.0-20.0 mg/L $PO_4$-P<br>(LCK 350) | NP |

### 1.4 Cations

| | | |
|---|---|---|
| DIN EN ISO 11885 (E 22)<br>2009-09 | Water quality - Determination of 33 elements by inductively coupled plasma atomic emission spectroscopy (ICP-OES) | B, NP, TR |
| DIN EN ISO 17294-2 (E 29)<br>2017-01 | Water quality - Application of inductively coupled plasma mass spectrometry (ICP-MS) - Part 2: Determination of selected elements including uranium isotopes | B |
| Hach LCK 303<br>2019-10 | Ammonium cuvette test, 2.0-47.0 mg/L $NH_4$-N<br>(LCK303) | NP, TR |

### 1.5 Sum parameters

| | | |
|---|---|---|
| DIN EN 1484 (H 3)<br>2019-04 | Water analysis - Guidelines for the determination of total organic carbon (TOC) and dissolved organic carbon (DOC)<br>(Deviation: *only particle-free sample (DOC)*) | B |
| Hach LCI 400/500<br>2019-10 | COD cuvette test 0-1000 mg/L $O_2$<br>(LCI 400/500) | B, NP |
| Hach LCK 410<br>2013-04 | Free chlorine cuvette test, 0.05-2.0 mg/L $Cl_2$<br>(LCK410) | NP, TR |

**Abbreviations used:**

| | |
|---|---|
| DIN | German Institute for Standardization |
| EN | European Norm |
| IEC | International Electrotechnical Commission |
| ISO | International Organization for Standardization |
| LCK | Hach Cuvette-Test-System |

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# Accreditation

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

**Atotech Deutschland GmbH & Co. KG**
**Erasmusstraße 20, 10553 Berlin**

meets the requirements according to DIN EN ISO/IEC 17025:2018 for the conformity assessment activities listed in the annex to this certificate. This includes additional existing legal and normative requirements for the testing laboratory, including those in relevant sectoral schemes, provided they are explicitly confirmed in the annex to this certificate.

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 partial accreditation certificate only applies in connection with the notice of 08.05.2024 with accreditation number D-PL-14564-01.
It consists of this cover sheet, the reverse side of the cover sheet and the following annex with a total of 8 pages.

Registration number of the partial accreditation certificate: **D-PL-14564-01-03**
It is a part of the accreditation certificate: D-PL-14564-01-00.

Berlin, 08.05.2024 Dr. Tobias Poeste
Head of Technical Unit

Translation issued:
28.05.2024 Dr. 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
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10117 Berlin

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Europa-Allee 52
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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

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# Deutsche Akkreditierungsstelle

# Annex to the Partial Accreditation Certificate D-PL-14564-01-03 according to DIN EN ISO/IEC 17025:2018

**Valid from:** **08.05.2024**

Date of issue: 08.05.2024

This annex is a part of the accreditation certificate D-PL-14564-01-00.

Holder of partial accreditation certificate:

**Atotech Deutschland GmbH & Co. KG**
**Erasmusstraße 20, 10553 Berlin**

with the locations

**Atotech Deutschland GmbH & Co. KG**
**Analytics und Materials Science**
**Erasmusstraße 20, 10553 Berlin**

**Atotech Deutschland GmbH & Co. KG**
**Analytics und Materials Science**
**Untergasse 47, 65468 Trebur-Geinsheim**

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.

Examinations in the areas:

**Chemical-physical tests, corrosion tests and mechanical-technological tests on coatings, coating systems, materials and/or coated preparations;**
**Physical testing of aqueous and organic coating systems;**
**Tests in accordance with manufacturer specifications**

**Within the test areas marked with *, the testing laboratory is permitted to freely select standardized or equivalent test methods without having to inform and obtain prior approval from DAkkS.**

**The testing laboratory is permitted to use the standardized or equivalent test methods listed here with different issue statuses without the need for prior information and approval by DAkkS. Excluded from this is chapter 3.**

**The test methods listed are examples.**

**The testing laboratory has an up-to-date list of all test methods in the flexible accreditation area.**

The test procedures are marked with the following symbols of the locations where they are carried out.

The marking B (Berlin) and TR (Trebur-Geinsheim) after the test and sampling methods indicates the location for which the competence is confirmed.
B = Atotech Deutschland GmbH & Co. KG, Berlin
TR = Atotech Deutschland GmbH & Co. KG, Trebur

## 1 Analysis of layers, layer systems and materials

### 1.1 Metallographical tests

| | | |
|---|---|---|
| DIN EN ISO 1463<br>2021-08 | Metallic and oxide coatings - Measurement of coating thickness - Microscopical method | B |
| DIN EN ISO 9220<br>2022-05 | Metallic coatings - Measurement of coating thickness - Scanning electron microscope method | B |

### 1.2 Measurement of coating thickness with non-destructive tests

| | | |
|---|---|---|
| DIN EN ISO 3497<br>2001-12 | Metallic coatings - Measurement of coating thickness - X-ray spectrometric method | B |

### 1.3 Chemical - physical tests for coating thickness measurement on nickel-plated components using the STEP-Test and on chrome-plated components for quantitative detection of microcracks or micropores *

| | | |
|---|---|---|
| DIN EN ISO 16866<br>2023-01 | Metallic and other inorganic coatings - Simultaneous thickness and electrode potential determination of individual layers in multilayer nickel deposits (STEP test) | B |
| ASTM B 764<br>2004-04 | Standard Test Method for Simultaneous Thickness and Electrode Potential Determination of Individual Layers in Multilayer Nickel Deposit (STEP - Test) | B |
| DIN 53100<br>2020-04 | Metallic coatings - Electroplated coatings of nickel plus chromium and of copper plus nickel plus chromium on plastics materials | B |
| ASTM B 604<br>1991 | Standard Specification for Decorative Electroplated Coatings of Copper Plus Nickel Plus Chromium on Plastics | B |

## 1.4 Corrosion tests

### 1.4.1 Constant climate salt spray tests on screws, fasteners, metal panels, components and decoratively coated parts to determine qualitative statements *

| | | |
|---|---|---|
| DIN EN ISO 9227<br>2023-03 | Corrosion tests in artificial atmospheres - Salt spray tests | B, TR |
| ASTM B 368<br>2021 | Standard Test Method for Copper-Accelerated Acetic Acid-Salt Spray (Fog) Testing (CASS Test) | B |
| ASTM B 117<br>2019 | Standard Practice for Operating Salt Spray (Fog) Apparatus | B, TR |

### 1.4.2 Condensation water climate test on screws, fasteners, sheets, components and decoratively coated parts to determine qualitative statements *

| | | |
|---|---|---|
| DIN EN ISO 6270-2<br>2018-04 | Paints and varnishes - Determination of resistance to humidity - Part 2: Condensation (in-cabinet exposure with heated water reservoir) | B, TR |
| ASTM D 2247<br>2015 | Standard Practice for Testing Water Resistance of Coatings in 100 % Relative Humidity | TR |

### 1.4.3 Kesternich test on screws, fasteners, sheets, components and decoratively coated parts to determine qualitative statements *

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

## 1.5 Mechanical-technological tests

### 1.5.1 Determination of the peel strength by means of a tensile test on copper-plated or decoratively coated components *

| | | |
|---|---|---|
| ASTM B 533<br>1985 | Standard Test Method for Peel Strength of Metal Electroplated Plastics | B |

### 1.5.2 Torque/clamp force test on plain, galvanized or nickel-plated screws or nuts to determine the tightening properties *

| | | |
|---|---|---|
| DIN EN ISO 16047<br>2013-01 | Fasteners - Torque/clamp force testing | TR |

### 1.5.3 Geometric measurements

| | | |
|---|---|---|
| DIN EN ISO 21920-3<br>2022-12 | Geometrical Product Specifications (GPS) - Surface texture: Profile method - Rules and procedures for the assessment of surface texture | TR |

### 1.5.4 Vickers hardness test

| | | |
|---|---|---|
| DIN EN ISO 6507-1<br>2018-07 | Metallic materials - Vickers hardness test - Part 1: Test method<br>(Deviation: *only HV5 - HV30*) | TR |

## 2 Physical investigations of aqueous and organic paint systems

| | | |
|---|---|---|
| DIN EN ISO 13736<br>2013-08 | Determination of flash point - Abel closed-cup method | TR |
| DIN EN ISO 3251<br>2019-09 | Paints, varnishes and plastics - Determination of non-volatile-matter content | TR |
| DIN EN ISO 2431<br>2012-03 | Paints and varnishes - Determination of flow time by use of flow cups<br>(Deviation: *only Cup3 and also <30s and >100s*) | TR |
| DIN ISO 2811-1<br>2016-08 | Paints and varnishes - Determination of density - Part 1: Pycnometer method | TR |
| DIN EN ISO 2409<br>2013-06 | Paints and varnishes - Cross-cut test | TR |

## 3 Tests according to manufacturer's instructions

### 3.1 Micropore Density

| | | |
|---|---|---|
| VW PV 1063<br>2018-11 | Chrome-Plated Surfaces - Determinig the Micropore Density | B |

### 3.2 Constant climate salt spray tests on screws, fasteners, metal panels and components to determine qualitative statements

| | | |
|---|---|---|
| Renault D17 1058 -K<br>2014-11 | Neutral Salt Spray Test | B, TR |

### 3.3 Climate Change Test

| | | |
|---|---|---|
| VW PV 1200<br>2019-10 | Vehicle Parts, Testing the Environmental Cycle Resistance (80 °C/-40 °C) | B, TR |

### 3.4 Cyclic Corrosion Test

| | | |
|---|---|---|
| Volvo STD 423-0014 (ACT)<br>2015-01 | Accelerated corrosion test - Atmospheric corrosion | B, TR |
| Volvo VCS 1027, 1449 (ACT II)<br>2014-02 | Accelerated corrosion test - version II - ACT II | B, TR |
| Ford CETP 00.00-L-467<br>2019-01 | Global Laboratory Accelerated Cyclic Corrosion Test | B, TR |
| GMW 14872<br>2022-03 | Cyclic Corrosion Laboratory Test | B, TR |
| VW PV 1210<br>2016-02 | Body and Add-On Parts/Hang-On Parts, Corrosion Test | B, TR |
| VW PV 1209<br>2016-02 | Add-On Parts/Hang-On Parts with a Zinc or Zinc Alloy Coating and Aluminum<br>Add-On Parts/Hang-On Parts (e.g., Heat Exchanger, Refrigerant Line), Corrosion Test (Environmental Corrosion Cycle Test) | B, TR |
| Renault D17 2028 -C (ECC1)<br>2007-10 | Corrosion test by automatic change of phases of salt spray, drying and humidity (ECC1) | B, TR |

### 3.5 Torque/clamp force test on plain, galvanized or nickel-plated screws or nuts to determine the tightening properties

| | | |
|---|---|---|
| GMW 3044<br>2017-10 | Material Specification: Zinc Plating | TR |
| GMW 3359<br>2020-03 | Material Specification: Non-Electrolytically Applied Zinc-Rich Coating | TR |
| GMW 4700<br>2014-02 | Material Specification: Zinc Alloy Plating | TR |
| GMW 16730<br>2017-11 | Material Specification: Cosmetic Coating, Black Zinc-Nickel Based | TR |
| Ford WZ 102<br>2021-08 | Fastener – Torque/Clamp Force Testing - Standard Conditions | TR |
| Renault 01-50-005 -H<br>2017-03 | Fasteners—Torque-Tension relation test for Bolts and Nuts | TR |
| VW 01131<br>2018-03 | Determination of friction coefficients - practice and assembly-oriented testing | TR |
| MBN 10544<br>2019-01 | Testing the torque/preload behavior | TR |

### 3.6 Minimum Performance Requirements for Decorative Chromium Plated Plastic Parts

| | | |
|---|---|---|
| GMW 14668<br>2021-03 | Material Specification: Minimum Performance Requirements for Decorative Chromium Plated Plastic Parts | B, TR |

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**Abbreviations used:**

| | |
|---|---|
| ASTM | American Society for Testing and Materials |
| DIN | German Institute for Standardization |
| EN | European Norm |
| Ford WZ xxx | Ford Testing specification |
| Ford CETP xx.xx-x-xxx | Ford Testing specification |
| GMW xxxx(x) | General Motors Worldwide Engineering Standards |
| IEC | International Electrotechnical Commission |
| ISO | International Organization for Standardization |
| PV | In-house method of ATOTECH Deutschland GmbH |
| Renault D17 xxxx-x | Renault Testing specification |
| Renault xx-xx-xxx-x | Renault Testing specification |
| Volvo VCS xxxx | Volvo Testing specification |
| Volvo STD xxx-xxxx | Volvo Testing specification |
| VW (PV) xxxx(x) | Volkswagen Testing specification |