



**China National Accreditation Service for Conformity Assessment**  
**LABORATORY ACCREDITATION CERTIFICATE**  
(Registration No. CNAS L2382 )

**Guangzhou Technical Center of**  
**Atotech (China) Chemicals Co., Ltd.**

*(Legal Entity: Atotech (China) Chemicals Co., Ltd.)*

No.73, Xinzhuang 2nd Road, Yonghe Economic Zone,  
GETDD, Guangzhou, Guangdong, China

*is accredited in accordance with ISO/IEC 17025: 2017 General Requirements for the Competence of Testing and Calibration Laboratories(CNAS-CL01 Accreditation Criteria for the Competence of Testing and Calibration Laboratories) for the competence to undertake the service described in the schedule attached to this certificate.*

*The scope of accreditation is detailed in the attached schedule bearing the same registration number as above. The schedule forms an integral part of this certificate.*

Effective Date: 2023-01-15

Expiry Date: 2029-01-14

Signed on behalf of China National Accreditation Service for Conformity Assessment

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The validity of the certificate can be checked on CNAS website at <http://www.cnas.org.cn/english/findanaccreditedbody/index.shtml>.

Name: Guangzhou Technical Center of Atotech (China) Chemicals Limited

Address: No. 73, Xinzhuang 2nd Road, Yonghe Economic Zone, GETDD, Guangzhou, Guangdong, China

Registration No. CNAS L2382

Accreditation Criteria: ISO/IEC 17025:2017 and relevant requirements of CNAS

Effective Date: 2023-02-14 Expiry Date: 2029-01-14

SCHEDULE 3 ACCREDITED TESTING SCOPE

| №  | Test Object   | Item/Parameter |   | Standard or Method  | Note   | Effective Date |
|--|---------------|----------------|---|---|--|----------------|
|  |               | №              | Item/ Parameter   |   |  |                |
| Not grouped  |               |                |   |   |  |                |
| 1  | Metal Coating | 1              | Heat cycle test of electroplated plastic parts          | Standard specification for decorative electroplated coatings of copper plus Nickel plus Chromium on plastics ASTM B604-91(2019) appendixes A1 | Accredited only for temperature range (85~-30) °C. | 2023-02-14     |
|  |               | 2              | Thickness of electroplated coatings                     | Standard test method for measurement of metal and oxide coating thickness by microscopical examination of a cross section ASTM B487-20        |  | 2023-02-14     |
|  |               |                |   | Standard test method for measurement of coating thickness by X-ray Spectrometry ASTM B568-98(2021)  |  | 2023-02-14     |
|  |               | 3              | Copper – Accelerated Acetic Acid Salt Spray Test (CASS) | Standard method for Copper –Accelerated Acetic Acid-salt spray (Fog) testing (CASS test) ASTM B368-21   |  | 2023-02-14     |
| Corrosion tests in artificial atmospheres –salt spray tests ISO 9227: 2022 |               |                |   | 2023-02-14  |  |                |



No. CNAS L2382

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|   |             |                |  | Corrosion tests in artificial atmospheres-salt spray tests GB/T10125-2021   |      | 2023-02-14     |
|   |             | 4              | Neutral salt spray test (NSS)  | Corrosion tests in artificial atmospheres -salt spray tests ISO 9227: 2022  |      | 2023-02-14     |
|   |             |                |  | Corrosion tests in artificial atmospheres-salt spray tests GB/T10125-2021   |      | 2023-02-14     |
|   |             | 5              | Simultaneous thickness and electrochemical potential determination of multilayer nickel deposits (STEP test) | Standard test method for simultaneous thickness and electrode potential determination of individual layers in multilayer Nickel deposit (STEP test) ASTM B764-04 (2021) |      | 2023-02-14     |
|   |             | 6              | Number of discontinuities in Chromium electroplating   | Standard specification for electrodeposited coatings of Copper plus Nickel plus Chromium and Nickel plus Chromium ASTM B456-17 (2022) appendixes X4                     |      | 2023-02-14     |
|   |             |                |  | Standard specification for decorative electroplated coatings of Copper plus Nickel plus Chromium on plastics ASTM B604-91(2019) appendixes X4                           |      | 2023-02-14     |
|   |             | 7              | Number of discontinuities in Chromium electroplating   | Standard specification for electrodeposited coatings of Copper plus Nickel plus Chromium and Nickel plus Chromium ASTM B456-17 (2022) appendixes X5                     |      | 2023-02-14     |
|   |             |                |  | Standard specification for decorative electroplated coatings of Copper plus Nickel plus Chromium on plastics ASTM B604-91(2019) appendixes X4                           |      | 2023-02-14     |
|   |             | 8              | Internal stress of plated metallic coatings  | Standard test method for measurement of internal stress of plated metallic coatings with Spiral contractometer ASTM B636/636M-15(2021)                                  |      | 2023-02-14     |
|   |             | 9              | Ductility of plated metallic coatings  | Standard practice for micrometer bend test for ductility of electrodeposits ASTM B490-09(2021)  |      | 2023-02-14     |



No. CNAS L2382

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|   |   | №              | Item/ Parameter   |  |  |                |
|   |   | 10             | Vickers microhardness of electroplated coatings                         | Metallic and other inorganic coatings - Vickers and Knoop microhardness ISO 4516:2002  | Accredited only for HV0.1&HV0.2        | 2023-02-14     |
|   |   |                |   | Metallic materials — Vickers hardness test — Part 1: Test method ISO 6507-1:2018   | Accredited only for HV0.05&HV0.1&HV0.2 | 2023-02-14     |
|   |   | 11             | Peel strength test  | Peel strength of Metallic Clad Laminates IPC TM650-94 2.4.8  |  | 2023-02-14     |
| 2 | Industrial water&Industrial waste water | 1              | Calcium   | Water quality- Determination of calcium -ETDA titrimetric method GB/T7476-1987   | Except for sampling                    | 2023-02-14     |
|   |   | 2              | Total organic carbon  | Water quality- Determination of total organic carbon - Combustion oxidation nondispersive infrared absorption method HJ 501-2009   | Except for sampling                    | 2023-02-14     |
|   |   | 3              | Concentration of chloride, nitrate, nitride, orthophosphate and sulfate | Water quality- Determination of dissolved anions by liquid chromatography of ions-Part 1: determination of : chloride, nitrate, nitride, orthophosphate and sulfate in waste water ISO 10304-1:2007(E) | Except for sampling                    | 2023-02-14     |
|   |   | 4              | Nickel  | Water quality- Determination of Nickel - Flame Atomic Absorption Spectrometric method GB/T11912-1989   | Except for sampling                    | 2023-02-14     |
|   |   | 5              | Chemical oxygen demand (COD)  | Water quality- Determination of the chemical oxygen demand- Dichromate method HJ 828-2017  | Except for sampling                    | 2023-02-14     |
|   |   | 6              | pH value  | Water quality- Determination of pH value-glass electrode method GB/T6920-1986  | Except for sampling                    | 2023-02-14     |
|   |   | 7              | Copper, zinc, lead and cadmium  | Water quality- Determination of copper, zinc, lead and cadmium-atomic Absorption spectrometry GB/T7475-1987 GB/T7475-1987  | Except for sampling                    | 2023-02-14     |



No. CNAS L2382

第 3 页 共 7 页

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|   |                               | 8              | Chloride        | Water quality- Determination of Chloride-Silver Nitrate titration method GB/T11896-1989                         | Except for sampling   | 2023-02-14     |
|   |                               | 9              | Conductivity    | Water quality: Determination of electrical conductivity ISO 7888:1985   | Except for sampling   | 2023-02-14     |
|   |                               | 10             | Cr(VI)          | Water quality-Determination of chromium(VI) -1,5 Diphenylcarbohydrazide spectrophotometric method GB/T7467-1987 | Except for sampling   | 2023-02-14     |
|   |                               | 11             | Pb              | Standard Test Methods for lead in water ASTM D3559-2015   | Except for sampling, Accredited only for Test Method A& Test Method C | 2023-02-14     |
| 3 | Electroplating bath solutions | 1              | Copper Sulfate  | Analytical method for Copper sulfate in acid copper plating baths A0000068-06                                   |   | 2023-02-14     |
|   |                               |                |                 | Analytical method for Copper sulfate in acid copper plating baths A0000069-02                                   | Accredited only for acid copper plating baths with iron               | 2023-02-14     |
|   |                               |                |                 | Analytical method for Copper sulfate in acid copper plating baths A0000410-TIT-03-03                            | Accredited only for GMF bath  | 2023-02-14     |
|   |                               | 2              | Sulfuric Acid   | Analytical method for Sulfuric Acid in acid copper plating baths A0000028-04                                    | Accredited only for EL bath   | 2023-02-14     |



No. CNAS L2382

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|   |             | №              | Item/ Parameter        |  |                                    |                |
|   |             |                |                        | Analytical method for Sulfuric Acid in acid copper plating bath A0000411-TIT-02-08 | Accredited only for GMF bath       | 2023-02-14     |
|   |             | 3              | Chloride content       | Analytical method for chloride in acid copper baths A0000060-TIT-06-04             | Accredited only for EL bath        | 2023-02-14     |
|   |             |                |                        | Analytical method for chloride in acid copper baths A0000412-TIT-02-04             | Accredited only for GMF bath       | 2023-02-14     |
|   |             | 4              | Total Nickel           | Analytical method for nickel content in nickel bath A0000364-TIT-03-15             |                                    | 2023-02-14     |
|   |             | 5              | Boric Acid             | Analytical method for Boric acid in nickel bath A0000352-TIT-04-09                 |                                    | 2023-02-14     |
|   |             | 6              | Chloride content       | Analytical method for Chloride in nickel bath A0000480-TIT-05-17                   |                                    | 2023-02-14     |
|   |             | 7              | pH                     | Analytical method for pH in nickel bath A0000932-PHY-01-04                         |                                    | 2023-02-14     |
|   |             | 8              | Cr, Fe, Ni, Pb, Cd, Zn | Cr, Fe, Ni, Pb, Cd and Zn as impurities in acidic copper baths A0001605-02         |                                    | 2023-02-14     |
|   |             | 9              | Cr, Fe, Cu, Pb, Sn, Cd | Cr, Ni, Cu, Pb and Cd as impurities in cyanidic zinc baths A0001615-01             |                                    | 2023-02-14     |
|   |             | 10             | Cr, Ni, Cu, Pb, Cd     | Cr, Ni, Cu, Pb and Cd as impurities in cyanidic zinc baths A0001616-01             |                                    | 2023-02-14     |
|   |             | 11             | Fe                     | Iron (Fe) in Chromium(VI)-bathes A0001757-02                                       |                                    | 2023-02-14     |
|   |             | 12             | Pd                     | Determination of Palladium A0000154-AA-05-02                                       | Accredited only for low-range bath | 2023-02-14     |
|   |             |                |                        | Determination of Palladium A0000156-AA-05-05                                       | Accredited                         | 2023-02-14     |



No. CNAS L2382

The scope of the accreditation in Chinese remains the definitive version.

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|   |             | №              | Item/ Parameter  |  |                          |                |
|   |             |                |  |  | only for high-range bath |                |
|   |             | 13             | Au   | Determination of Gold A0000161-AA-05-07  |                          | 2023-02-14     |
|   |             | 14             | Cr,Fe,Ni,Pb,Cd,Zn  | Cr, Fe, Ni, Pb, Cd and Zn as impurities in cyanidic copper baths A0001607-01       |                          | 2023-02-14     |
|   |             | 15             | Cr,Fe,Cu,Zn  | Cr, Fe, Cu and Zn as impurities in e'less nickel baths A0001608-01                 |                          | 2023-02-14     |
|   |             | 16             | Zn,Cr,Fe,Cu,Ca,Mg,Mn   | Zn, Cr, Fe, Cu, Ca,, Co, Mg and Mn as impurities in nickel baths A0001614-02       |                          | 2023-02-14     |
|   |             | 17             | Cu,Pb  | Determination Cu,Pb in Chrome bath A0001603-01                                     |                          | 2023-02-14     |
|   |             | 18             | Cu   | Determination Cu in Stannatech bath A0000192-06                                    |                          | 2023-02-14     |
|   |             | 19             | Sn   | Determination total Tin in Stannatech bath A0000191-05                             |                          | 2023-02-14     |
|   |             | 20             | Ni   | Determination Nickel in Zn-Ni bath A0000170-04                                     |                          | 2023-02-14     |
|   |             | 21             | Zn   | Determination Zinc in Zn-Ni bath A0000171-03                                       |                          | 2023-02-14     |
|   |             |                |  | Determination Zinc in Passivated bath A0000175-AA-02-09                            |                          | 2023-02-14     |
|   |             | 22             | Fe   | Determination Iron in passivated bath A0000176-AA-02-09                            |                          | 2023-02-14     |
|   |             | 23             | Concentration of chloride and sulfate in hard chromium baths | Determination of catalyst, chloride and sulfate in hard chromium baths A0000447-06 |                          | 2023-02-14     |
|   |             | 24             | Concentration of total organic carbon                        | Determination of the total organic carbon in acid copper baths A0001656-02         |                          | 2023-02-14     |



No. CNAS L2382

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|   |                              | №              | Item/ Parameter |  |   |                |
|   |                              |                |                 | Determination of the total organic carbon in nickel baths<br>A0001298-03   |   | 2023-02-14     |
|   |                              | 25             | Surface tension | Surface active agents-Determination of surface tension<br>GB/T22237-2008   | Accredited only for Plate method                    | 2023-02-14     |
| 4 | Chromate Conversion Coatings | 1              | Cr(VI)          | Metrallic and other inorganic coatings-Chromate conversion coatings on zinc, cadmium, aluminium-zinc alloys and zinc-aluminium alloys ISO 3613:2021(E) |   | 2023-02-14     |
| 5 | Nickel foils                 | 1              | Sulfur          | Steel and iron-Determination of total carbon and sulfur content Infrared absorption method after combustion in an induction furnace GB/T20123-2006     | Accredited only for sulfur in Nickel foils analysis | 2023-02-14     |



No. CNAS L2382

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