SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

ELEMENT MATERIALS TECHNOLOGY BALTIMORE
5 North Park Drive
Hunt Valley, MD 21030
Mrs. Sarah D. Brammer Phone: 410 584 9099

CHEMICAL

Valid To: December 31, 2026 Certificate Number: 214.37

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following types of tests on the following product types: Aerospace, Automotive, Avionics, Consumer Products, Electronics, Industrial, Medical, Military Telecommunication and Textiles.

| **Test Technology:** | **Test Method(s):** |
|---|---|
| Cleanliness | IPC-TM-650 (Method 2.3.25) section 4;<br>MIL-STD-883, Method 5011 |
| Copper Purity | IPC-TM-650 (Method 2.3.15) |
| Density/Specific Gravity | ASTM D792 (Method A) |
| Fourier Transform Infrared Spectroscopy (FTIR)<br>(*Qualitative Only*) | BAL T-14[1] |
| Ion Chromatography | IPC-TM-650 (Methods 2.3.28 and 2.3.28.1);<br>MIL-STD-883, Method 5011 |
| pH | MIL-STD-883, Method 5011 |
| Porosity – Vapor | IPC-TM-650 (Method 2.3.24.2) |
| Scanning Electron Microscopy/Energy Dispersive X-Ray Spectroscopy (SEM/EDS)<br>(*Semi-Quantitative*) | BAL O-20[1] |
| Solids Content | IPC-TM-650 (Method 2.3.34) |
| Solvent Immersion/Resistance to Solvents | IPC-TM-650 (Method 2.3.4);<br>MIL-STD-202, Method 215A |



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| **Test Technology:** | **Test Method(s):** |
|---|---|
| Thermal Analysis | |
| Melting Point (Tm), Glass Transition Temperature (Tg) and Degree of Cure (ΔTg) by Differential Scanning Calorimetry (DSC) | ASTM D3418; ASTM E793; ASTM E794; ASTM E1356; ASTM D4591; ASTM E537; ASTM E1269; ASTM E2160; ASTM F2625; IPC-TM-650 (Method 2.4.25) |
| Filler Content, Thermal Stability, Weight Loss and Decomposition Temperature (Td) by Thermogravimetric Analysis (TGA) | ASTM E1131; ASTM D3850; MIL-STD-883, Method 5011; IPC-TM-650 (Method 2.4.24.6) |
| Glass Transition Temperature (Tg) Coefficient of Thermal Expansion (CTE) and Time to Delamination by Thermomechanical Analysis (TMA) | ASTM E831; ASTM E2347; ASTM E1824; ASTM E1545; IPC-TM-650 (Method 2.4.41, 2.4.24, 2.4.24.1, 2.4.24.3, 2.4.24.5, 2.4.41.3, and 2.4.41.4); MIL-STD-883, Method 5011 |
| Thermal Conductivity | ASTM C518; ASTM E1530 |
| Viscosity | ASTM D1084; IPC-TM-650 (Method 2.4.34, 2.4.34.1, and 2.4.34.4); MIL-STD-883, Method 5011 |

Supporting the following documents: IPC-4101, IPC-CC-830, IPC-J-STD-001, IPC-J-STD-004, IPC-J-STD-005, IPC-SM-840, MIL-P-50884, MIL-PRF-31032, MIL-PRF-55110.

Facility studies performed according to IPC-QL-653 “Certification of Facilities that Inspect/Test Printed Boards, Components and Materials.”

[1] In-house Test Method.

# Accredited Laboratory

A2LA has accredited

## ELEMENT MATERIALS TECHNOLOGY BALTIMORE

*Hunt Valley, MD*

for technical competence in the field of

## Chemical Testing

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017 *General requirements for the competence of testing and calibration laboratories*. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (*refer to joint ISO-ILAC-IAF Communiqué dated April 2017*).

Presented this 26th day of February 2025.

Mr. Trace McInturff, Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 214.37
Valid to December 31, 2026

*For the tests to which this accreditation applies, please refer to the laboratory's Chemical Scope of Accreditation.*