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; 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) (*Qualitative Only*)	BAL T-14[1]
Ion Chromatography	IPC-TM-650 (Methods 2.3.28 and 2.3.28.1); 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) (*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); MIL-STD-202, Method 215A

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.