



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

NTS LABS, LLC BALTIMORE  
5 North Park Drive  
Hunt Valley, MD 21030  
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CHEMICAL

Valid To: December 31, 2024

Certificate Number: 0214.37

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)<sup>1</sup>:**

Cleanliness	Bellcore-GR-78-CORE; IPC-TM-650 (Method 2.3.25); 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) ( <i>Qualitative Only</i> )	BAL T-14 <sup>2</sup>
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) ( <i>Semi-Quantitative</i> )	BAL O-20 <sup>2</sup>
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)<sup>1</sup>:**

Thermal Analysis

Melting Point (Tm), Glass Transition Temperature (Tg) and Degree of Cure ( $\Delta T_g$ ) 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 2.4.25)

Glass Transition Temperature (Tg) Coefficient of Thermal Expansion (CTE) and Time to Delamination by Thermomechanical Analysis (TMA)

ASTM E831; ASTM E228; ASTM E2347; ASTM E2092; 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.”

<sup>1</sup> When the date, edition, version, etc. is not identified in the scope of accreditation, laboratories may use the version that immediately precedes the current version for a period of one year from the date of publication of the standard measurement method, per part C., Section 1 of A2LA *R101 - General Requirements- Accreditation of ISO-IEC 17025 Laboratories*.

<sup>2</sup> In-house Test Method.



# Accredited Laboratory

A2LA has accredited

## NTS LABS, LLC 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 5<sup>th</sup> day of June 2023.

A blue ink signature of Mr. Trace McInturff, written in a cursive style.

Mr. Trace McInturff, Vice President, Accreditation Services  
For the Accreditation Council  
Certificate Number 0214.37  
Valid to December 31, 2024

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