SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

ELEMENT MATERIALS TECHNOLOGY HUNTSVILLE
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ACOUSTICS AND VIBRATION

Valid To: December 31, 2025 Certificate Number: 214.41

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following Acoustics and Vibration tests:

Tests	Test Method(s):
Explosive Atmosphere [1] (Site to 50,000 ft simulation)	MIL-STD-202, 109; MIL-STD-810, 511 Procedures I and II; RTCA/DO-160, Section 9
Sand and Dust [1] Site Ambient to 160°F Air Velocity to 40 MPH	MIL-STD-202, 110; MIL-STD-810, 510; RTCA/DO-160, Section 12; IEC 60529 IP5X, IP6X
Temperature/Altitude [1] (-65 to 160) °F 80,000 ft	MIL-STD-202, 105; MIL-STD-810, 500; RTCA/DO-160, Section 4
High Temperature [1] Up to 600 °F	MIL-STD-202, 108; MIL-STD-810, 501; RTCA/DO-160, Sections 4 and 5
Low Temperature [1] Down to -100 °F	MIL-STD-810, 502; RTCA/DO-160, Sections 4 and 5
Temperature Shock [1] (-100 to +300) °F	MIL-STD-202, 107; MIL-STD-810, 503
Temperature/Humidity (-100 to +300) °F (20 to 95) % Humidity	MIL-STD-202, 103 and 106; MIL-STD-810, 507 (*excluding vibration*); RTCA/DO-160, Section 6

Tests	Test Method(s):
Explosive Decompression 100,000 ft ≤ 100msec	MIL-STD-810, 500 Procedure IV
Rain/Wind	MIL-STD-810, 506
Icing/Freezing Rain	MIL-STD-810, 521
Immersion	MIL-STD-202, 104; MIL-STD-810, 512; IEC 60529 IPX7, IPX8
Freeze/Thaw	MIL-STD-810, 521
Waterproofness	RTCA/DO-160, Section 10; IEC 60529 IPX1, IPX2, IPX3, IPX4, IPX5, IPX6
Salt Fog	ASTM B117; MIL-STD-202, 101; MIL-STD-810, 509; RTCA/DO-160, Section 14
Salt Fog and SO2	MIL-STD-810, 518
Solar Radiation (Heat Effects only)	MIL-STD-810, 505, Procedure I
Fluid Susceptibility/Exposure to Fluids (Fluid Compatibility and Resistance to Fluids)	MIL-STD-202, 215; MIL-STD-810, 504; RTCA/DO-160, Section 11
Acoustics Reverberation Up to 160 dB Overall (10 to 20,000) Hz	MIL-STD-810, 515
Acoustics Progressive Wave Tube Up to 160 dB Overall (10 to 20,000) Hz	MIL-STD-810, 515
Thermal Acoustic Up to 160 dB Overall (10 to 20,000) Hz (-65 to 200) °F	MIL-STD-810, 515 with Temperature
Acoustic Emissions 23dBA Noise Floor (23 to 175) dBA (10 to 20,000) Hz	MIL-STD-740-1

Tests	**Test Method(s):**
Vibration Electro Dynamic Shaker Sine, Random, and Combined 30,000 Pounds Force (5 to 2,000) Hz 1.0” Double Amplitude Combined Environment of (-65 to 300) °F	MIL-STD-167-1 5.1, 5.2, 5.3; MIL-STD-202, 201, 204, and 214; MIL-STD-810, 514, and 528; RTCA/DO-160, Section 8
Vibration Servo Hydraulic Shaker Sine, Random, and Combined 30,000 Pounds Force (2 to 200) Hz 4.0” Double Amplitude Combined Environment of (-65 to 300) °F	MIL-STD-810, 514, and 516; RTCA/DO-160, Section 8
Shock Electro Dynamic Shaker 30,000 Pounds Force 1.0” Double Amplitude 1,200 SRS G	MIL-STD-202, 207, and 213; MIL-STD-810, 516, and 519; RTCA/DO-160, Section 7
Acceleration 22ft Radius Centrifuge / 25G’s 3 Foot Radius Centrifuge / 200 G’s	MIL-STD-202, 212; MIL-STD-810, 513; RTCA/DO-160, Section 7
Transportation (Loose Cargo)	MIL-STD-810, 514
Drop Impact	MIL-STD-202, 203; MIL-STD-810, 516
Earthquake Resistance (Seismic) Vibration Characteristics of Materials Acceptance Criteria for Seismic Qualification by Shake Table Testing of Nonstructural Components and Systems	IEEE-344; Telcordia GR-63 (5.4.1); ICC-ES AC156

[1] This laboratory also uses customer supplied specifications and/or methods directly related to the testing technologies and parameters listed above.

Accredited Laboratory

A2LA has accredited

ELEMENT MATERIALS TECHNOLOGY HUNTSVILLE

Huntsville, AL

for technical competence in the field of

Acoustics and Vibration 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 8th day of March 2024.

Mr. Trace McInturff, Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 214.41
Valid to December 31, 2025
Revised March 19, 2024

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