



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 Atmosphere¹
(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 Dust¹
Site Ambient to 160°F
Air Velocity to 40 MPH

MIL-STD-202, 110;
MIL-STD-810, 510;
RTCA/DO-160, Section 12

Temperature/Altitude¹
(-65 to 160) °F
80,000 ft

MIL-STD-202, 105;
MIL-STD-810, 500;
RTCA/DO-160, Section 4

High Temperature¹
Up to 600 °F

MIL-STD-202, 108;
MIL-STD-810, 501;
RTCA/DO-160, Sections 4 and 5

Low Temperature¹
Down to -100 °F

MIL-STD-810, 502;
RTCA/DO-160, Sections 4 and 5

Temperature Shock¹
(-100 to +300) °F

MIL-STD-202, 107;
MIL-STD-810, 503

Thermal Vacuum¹
1x10⁻⁵ torr ± 250 °F

MIL-STD-1540D

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 \leq 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

Freeze/Thaw

MIL-STD-810, 521

Waterproofness

RTCA/DO-160, Section 10

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

Fungus

MIL-STD-810, 508;
RTCA/DO-160, Section 13

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

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

Mechanical 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.

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 214.41
Valid to December 31, 2025

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