



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

ELEMENT MATERIALS TECHNOLOGY – MELBOURNE  
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MECHANICAL

Valid To: February 28, 2023

Certificate Number: 1719.03

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory for the following tests:

**Test Description:**

**Tests Method(s):**

*Vibration*<sup>1</sup>

Up to 9,000 lbf  
(3 to 4000) Hz  
Acceleration: Up to 100 g  
Displacement: Up to 4 in

RTCA/DO-160, Section 8;  
MIL-STD-202 Method 106;  
MIL-STD-810, Methods 514, 516, Procedures IV,  
VI, and 519;  
MIL-STD-167;  
IEC 60945, Section 8.7

*Shock*<sup>1</sup>

Up to 210 g; 1/2 Sine  
(< 1 to 35) ms at Terminal Peak

RTCA/DO-160 Section 7;  
MIL-STD-202 Methods 202, 205, and 213 (higher  
levels need drop tower);  
MIL-STD-810, Methods 514, 516, Procedures I,  
II, III, and V;  
IEC 68-2-27; MIL-S-901D

*SRS*<sup>1</sup>

Up to 250 g  
(5 to 2500) Hz

MIL-STD-810, Method 516

*Loose Cargo*<sup>1</sup>

Circular Synchronous Bed 300 RPM,  
1 inch Orbital Path at 5 Hz

MIL-STD-810, Method 514

*Acceleration*<sup>1</sup>

MIL-STD-202, Method 212 (*Test Conditions A  
and C only*);  
MIL-STD-810, Method 513;  
MIL-E-5272, Rev. C, 22 Jan 71, Para 4.16

**Test Description:**

**Tests Method(s):**

Salt Spray<sup>1</sup>

ASTM B117, ASTM D1735, ASTM D2247;  
DIN50021-SS; IEC 60945 Section 8.12;  
MIL-STD-202, Method 101;  
MIL-STD-810, Method 509;  
RTCA/DO-160, Section 14

Sand & Dust<sup>1</sup>

IEC 60529, Section 13;  
MIL-STD-810, Method 510;  
MIL-STD-202 Method 110A;  
RTCA/DO-160, Section 12

Humidity (Temp/Humidity)<sup>1</sup>

Bellcore GR-63 (5.1.1.3);  
MIL-STD-202 Methods 103, 105.1, and 106;  
MIL-STD-810, Method 507;  
RTCA/DO-160, Section 6;  
DIN 50017; IEC 60945, Section 8.3

Moisture Resistance<sup>1</sup>

MIL-STD-202, Method 106

High/Low Temperature<sup>1</sup>

MIL-STD-810, Methods 501, 502, 520;  
MIL-STD-202, Method 108A;  
IEC 60945, Sections 8.2, 8.4;  
RTCA/DO160, Sections 4.5.1, 4.5.2, 4.5.3, 4.5.4,  
4.5.5, 5, 24 (Category A & C)

Thermal Shock<sup>1</sup>

RTCA/DO160, Section 6;  
IEC 60945, Section 8.5;  
MIL-STD-202 Method 107G;  
MIL-STD-810, Method 503

Altitude<sup>1</sup>  
*Up to 70,000 ft*

MIL-STD-810, Method 500;  
RTCA/DO160 Sections 4.6.1, 4.6.3

Leakage (Immersion)<sup>1</sup>

MIL-STD-810, Method 512;  
IEC 60945, Section 8.9

Fluid Susceptibility<sup>1</sup>

MIL-STD-810, Method 504;  
RTCA/DO-160, Section 11

HALT/HASS<sup>1</sup>  
*Random Vibration (5 to 5000) Hz*  
*Level (0 to 85) g(pk)*  
*Temperature: (-100 to 200) °C*

Halt Standard;  
General Halt Requirements, Customer Supplied



**Test Description:**

**Test Method(s):**

Rapid Decompression <sup>1</sup>	MIL-STD-810, Method 500; RTCA/DO160
Over Pressure <sup>1</sup>	RTCA/DO160
Rain <sup>1</sup>	MIL-STD-810 Method 506 Proc III; IEC 60945, Section 8.8
Solar Radiation <sup>1</sup>	MIL-STD-810, Method 505
Impact <sup>1</sup>	UL 746C, Section 57
Icing/Freezing Rain <sup>1</sup>	MIL-STD-810, Method 521; RTCA/DO160, Section 24
Pressure <sup>1</sup> <i>Up to 3,000 psi</i>	Valve Research QTP50007-1
Water <sup>1</sup>	IEC 60529, Section 14
Waterproofness <sup>1</sup>	RTCA/DO160, Section 10.3.1, 10.3.3 & 10.3.4
Freeze/Thaw <sup>1</sup>	MIL-STD-810, Method 524
Water Jet Cleaning <sup>1</sup> <i>50 psi</i>	DRS 9608-96800-0001, Customer Supplied (PSI 50)
Steam Jet <sup>1</sup> <i>105 psi</i>	DRS 9608-96800-0001, Customer Supplied (105 PSI)
Flammability <sup>1</sup>	RTCA/DO160, Section 26, CAT C; FAR 25-853
Drop Test <sup>1</sup>	IEC 60945/Ed4, Section 8.6.1
Blowing Rain <sup>1</sup>	MIL-STD-810, Method 506, Procedure I

<sup>1</sup> Using customer-specified test methods utilizing any combinations of test equipment parameters listed above.

Note: this lab is capable of performing current and older versions of MIL-STD-810 (versions B through H) and RTCA/DO-160 (versions B through G) for the methods listed above. The methods listed above on this Scope are accredited.





## Accredited Laboratory

A2LA has accredited

### **ELEMENT MATERIALS TECHNOLOGY - MELBOURNE**

*Melbourne, FL*

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 24<sup>th</sup> day of February 2021.

A blue ink signature of the Vice President of Accreditation Services.

Vice President, Accreditation Services  
For the Accreditation Council  
Certificate Number 1719.03  
Valid to February 28, 2023

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