



SCOPE OF ACCREDITATION TO ISO/IEC 17025:20

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ELEMENT MATERIALS TECHNOLOGY ER-a3TERNOLOSO
9725 Girard Avenue South
Minneapolis, MN 55431 2621
Ingrid Miller Phone: 95288 7795
Email: Ingrid.miller@element.com

MECHANICAL

Valid to: August 31, 2025

Certificate Number: 1719.01

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory for the following environmental simulation and mechanical tests on the following products and materials: aircraft components, automotive components, gaskets, seals and packings, packaging and containers, pipes, hoses, valves and fittings, rubber and rubber products, tools, windows and doors, wiring harnesses, subassemblies, telecommunication cabinets and components in the Telecommunications, 3

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CORE



Test Technology/Description:

Test Method(s)/Standard(s):

Firearms Resistance

GR-487-CORE;
GR-3125-CORE;
GR-13-CORE;
GR-771-CORE;
GR-937-CORE;
GR-950-CORE;
GR-3108-CORE;
GR-3178-CORE

Fire Test(powerplant)

DOT/FAA AC 20-135;
ISO 2685;
RTCA/DO-160, Section 26 Cat A & B
SAE AS4273;
SAE AS1055

Fire Test / Flammability

RTCA/DO-160, Section 26, Cat C
UL 94;
GR-13-CORE;
GR-63-CORE;
GR-487-CORE;
ANSI T1-319;
GR-3120-CORE;
GR-3125-CORE;
GR-771-CORE;
GR-937-CORE;
GR-950-CORE;
GR-3178-CORE;
GR-326-CORE

Fungus

ASTM C1338;
ASTM D3273;
ASTM G21;
GR-13-CORE;
GR-487-CORE;
MIL -STD-810, Method 508;
RTCA/DO-160, Section 13;
SAE J1455;
GR-771-CORE;
GR-950-CORE;
MIL -PRF-28800 F;
ASTM D2020

Hosedown/ Water Resistance
Waterproofness / Enclosure Protection

IEC 60529, IPX1
IEC 60529, IPX2;
IEC 60529, IPX3, Section 14.2.3;
IEC 60529, IPX4, Section 14.2.4;
IEC 60529, IPX5, Section 14.2.5;
IEC 60529, IPX6, Section 14.2.6;
IEC 60529, IPX7, Section 14.2.7;
IEC 60529, IPX8, Section 14.2.8;
NEMA 250 (2014);
RTCA/DO-160, Section 10;
UL 50 (2007)
UL 50E (2007)



Test Technology/Description:

Test Method(s)/Standard(s):

Hosedown / Water Resistance /
Waterproofness / Enclosure Protection
(cont.)

MIL -STD-810, Method 512 (Immersion)
GR-3125-CORE
GR-13-CORE
GR-487-CORE
GR-771-CORE
GR-937-CORE
GR-950-CORE
GR-3108-CORE
GR-3178-CORE

Humidity¹
Up to 98%RH
Temperature(40 to 200)F

GR-487-CORE
GR-63-CORE
MIL -STD-810, Method 507;
RTCA/DO-160, Section 6;
SAE J1455;
IEC 60945, Section 8.3;
IEC 600682-30;
IEC 600682-38;
IEC 600682-56;
IEC 600682-61;
IEC 600682-78;
IEC 600683-4;
ASTM D4332;
GR-3120-CORE
GR-3121-CORE;
GR-3123-CORE
GR-3125-CORE
GR-13-CORE
GR-771-CORE
GR-937-CORE
GR-950-CORE
GR-3108-CORE
GR-3178-CORE
GR-326-CORE

Impact Resistance

ASTM D2794;
GR-487-CORE
GR-3120-CORE
GR-3121-CORE
GR-3123-CORE
GR-3125-CORE
GR-13-CORE
GR-771-CORE
GR-937-CORE
GR-950-CORE
GR-3178-CORE
GR-326-CORE

Package Testing

ASTM D4169
GR-3120-CORE
GR-3121-CORE
GR-3123-CORE
GR-3125-CORE
GR-13-CORE



Test Technology/Description:

Test Method(s)/Standard(s):

Package Testin(cont.)

GR-487-CORE
GR-771-CORE
GR-950-CORE
GR-3108-CORE
GR-3178-CORE
GR-326-CORE

Salt Spray and Corrosion Resistance
8'H x 8'W x 12'L Chamber
Temperature: (30 to 55) °C

ASTM B117; ASTM G85
GR-487-CORE
MIL -STD-810, Method 509;
NEMA 250 (2014);
RTCA/DO-160, Section 14;
SAE J1455;
UL 50 (2007) UL 50E (2007)
IEC 600682-11;
IEC 60945, Section 8.12
GR-3121-CORE
GR-3125-CORE
GR-13-CORE
GR-771-CORE
GR-937-CORE
GR-950-CORE
GR-3108-CORE
GR-3178-CORE
GR-326-CORE

Cyclic Corrosion Testin
Temperature: (30 to 55) °C

IEC 60945, Section 8.12
IEC 600682-52

Rain/ Blowing Rain/ Wind Driven Rain
Velocity: upto 90mph
Rainfall Rate: up to 6in/hr

GR-487-CORE
MIL -STD-810, Method 506;
NEMA 250 (2014)
UL 497, Para. 34;
UL 50 (2007);
UL 50E (2007);
IEC 60945, Section 8.8;
GR-3125-CORE
GR-771-CORE
GR-950-CORE
GR-3178-CORE
GR-326-CORE

Temperature Exposure
High or Low/ Thermal Shock
Temperature: (-100 to 650) °F

GR-487-CORE
GR-63-CORE
MIL -STD-810, Method 501 and 502;
NEMA 250 (2014)
RTCA/DO-160, Section 4;
SAE J1455;
IEC 60945, Sections 8.2 and 8.4;
IEC 600682-1;
IEC 600682-2;
IEC 600682-14;



Test Technology/Description:

Test Method(s)/Standard(s):

Combined Environment (excluding vibration)

MIL -STD-810, Method 520

Sand and Dust

GR-487-CORE;
IEC 60529, IP5X, Sections 13.4 and 13.5;
IEC 60529, IP6X, Sections 13.4 and 13.6;
RTCA/DO-160, Section 12;
MIL -STD-810, Method 510;
MIL -STD-202, Method 110;
IEC 600682-68;
GR-326-CORE;
GR-937-CORE;
GR-950-CORE;
GR-3120-CORE;
GR-3123-CORE;
GR-3125-CORE

Highly Accelerated Life Testing (HALT)

HALT and HASS (Section 3), Gregg K. Hobbs, Ph.D
PE; Hobbs Engineering; 1992. Accelerated Reliability

Highly Accelerated Stress Screening (HASS) Engineering: HALT and HASS (pp. 35);

Temperature: (100 to 200)°C

Ramp Rate: 70°C/min

50 Grms Repetitive Shock with Six
Degrees of Freedom

Test Technology/Description:

Test Method(s)/Standard(s):

Vibration, Standard / Transportation
(1 to 3,000) Hz @
18,000 lbf Sine or
15,000 lbf Random
(cont.)

GR-326-CORE
GR-3120-CORE
GR-3121-CORE
GR-3123-CORE
GR-3125-CORE

Acceleration
Range: (0 to 110) Gs

MIL -STD-810, Method 513, Procedures I and II;
RTCA/DO-160, Section 7
IEC 600682-7

Icing / Freezing Rain

MIL -STD-810, Method 521;
NEMA 250 (2014)
RTCA/DO-160, Section 24;
UL 50 (2007)
UL 50E (2007)
GR-487-CORE
GR-771-CORE
GR-950-CORE
GR-3120-CORE
GR-3125-CORE

Fluid Susceptibility/ Immersion and Splash
Contamination by Fluids

MIL -STD-810, Method 504;
RTCA/DO-160, Section 11;
SAE J1455;
IEC 60945, Sections 8.8, 9, and 8.11;
IEC 600682-18;

Telecommunications Tests:

CATV Mechanical Bend and Torque	ANSI/SCTE 09; ANSI/SCTE 10; ANSI/SCTE 88; ANSI/SCTE 98; ANSI/SCTE 149; ANSI/SCTE 166
CATV Dimensional Measurements	ANSI/SCTE 31; ANSI/SCTE 33; ANSI/SCTE 39; ANSI/SCTE 51
CATV Tensile and Compression	ANSI/SCTE 59; ANSI/SCTE 61; ANSI/SCTE 73; ANSI/SCTE 99; ANSI/SCTE 191
CATV Environments	ANSI/SCTE 60; ANSI/SCTE 69; ANSI/SCTE 143

Industries served Telecommunications, Aerospace, Defense, and Electronics

Note: This lab is capable of performing current and older versions of ~~SM~~ ~~810~~ (versions B through G) and RTCA/DO ~~160~~ (versions B through G) for the methods listed above. The methods listed above on this Scope are accredited. The following test method is a guideline utilized to perform the above fungus test: **MHBK-454B, Guideline 4.**

¹Also using customer specific test methods utilizing any combination of test equipment ~~and~~ ~~methods~~ listed above.

²This laboratory performs field testing activities for these tests.

³When the date, edition, version, etc. is not identified in the scope of accreditation, laboratories may use the



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