



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

ELEMENT MATERIALS TECHNOLOGY MINNEAPOLIS LLC
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ELECTRICAL

Valid to: August 31, 2021

Certificate Number: 1719.02

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory for the following 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, Aircraft, Aerospace, Automotive, Medical, Defense, Electronics and Agriculture industries.

Test Technology/Description:

Test Method(s)/Standard(s):

Conducted Emissions,
Audio Frequency

MIL-STD-461, Method CE101;
BOEING D6-16050-4, Sections 8.3.1 and 8.3.2;
BOEING D6-16050-5, Section 8.1.1;
BOEING D6-16050-6, Section 8.3

Conducted Emissions,
Radio Frequency

MIL-STD-461, Method CE102;
RTCA/DO-160, Section 21;
AIRBUS ABD0100.1.2, Section 3.4.5;
BOEING D6-16050-4, Section 8.4;
BOEING D6-16050-5, Section 8.2;
BOEING D6-16050-6, Section 8.4

Conducted Susceptibility, Audio
Frequency

MIL-STD-461, Method CS101;
RTCA/DO-160, Sections 18 and 19;
AIRBUS ABD0100.1.8, Section 2.4;
AIRBUS ABD0100.1.2, Section 3.4;
BOEING D6-16050-4, Section 7.2;
BOEING D6-16050-5, Section 7.2;
BOEING D6-16050-6, Section 7.2;
GR-1089-CORE

Conducted Susceptibility,
Radio Frequency

MIL-STD-461, Method CS103;
MIL-STD-461, Method CS104;
MIL-STD-461, Method CS105;
MIL-STD-461, Method CS114;
RTCA/DO-160, Section 20;
AIRBUS ABD0100.1.2, Section 3.3.2;
BOEING D6-16050-4, Section 7.3;
BOEING D6-16050-5, Section 7.3;
BOEING D6-16050-6, Section 7.3;

Test Technology/Description:

Test Method(s)/Standard(s):

Conducted Susceptibility,
Transient

MIL-STD-461, Method CS106;
MIL-STD-461, Method CS115;
MIL-STD-461, Method CS116;
MIL-STD-461, Method CS117;
RTCA/DO-160, Sections 17 and 22;
AIRBUS ABD0100.1.2, Sections 3.2.2 and 3.4;
BOEING D6-16050-4, Sections 7.4 and 7.5;
BOEING D6-16050-5, Sections 7.4 and 7.5;
BOEING D6-16050-6, Sections 7.4 and 7.5;
GR-1089-CORE

Radiated Susceptibility,
Audio Frequency,
Including DC

MIL-STD-461, Method RS101 (30 Hz to 100 kHz);
RTCA/DO-160, Section 19;
AIRBUS ABD0100.1.2, Section 3.4;
BOEING D6-16050-4, Section 7.2;
BOEING D6-16050-5, Section 7.2;
BOEING D6-16050-6, Section 7.2;
MIL-STD-1399

Radiated Emissions,
Magnetic Field

MIL-STD-461, Method RE101 (30 Hz to 100 kHz);
RTCA/DO-160, Section 15;
AIRBUS ABD0100.1.2, Section 3.4.1

Radiated Emissions,
Electric Field

MIL-STD-461, Method RE102 (10 kHz to 40 GHz);
MIL-STD-461, Method RE103 (10 kHz to 40 GHz);
RTCA/DO-160, Section 21;
AIRBUS ABD0100.1.2, Section 3.4.5;
BOEING D6-16050-4, Section 8.4;
BOEING D6-16050-5, Section 8.2;
BOEING D6-16050-6, Section 8.4

Radiated Susceptibility,
Radio Frequency

MIL-STD-461, Method RS103 (10 kHz to 40 GHz, 200 V/m);
RTCA/DO-160, Section 20;
AIRBUS ABD0100.1.2, Section 3.3;
BOEING D6-16050-4, Section 7.3;
BOEING D6-16050-5, Section 7.3;
BOEING D6-16050-6, Section 7.3;
ISO 11452-2:2019

Radiated Susceptibility, Transient

MIL-STD-461, Method RS02

Power Quality Test

RTCA/DO-160, Section 16;
MIL-STD-704;
MIL-STD-1275;
MIL-STD-1399;
AIRBUS ABD0100.1.8, Section 2.4;
BOEING D6-16050-4, Section 7.5.3;
BOEING D6-16050-6, Section 7.5.3;
BOEING 787B3-0147;
GR-1089-CORE:
- DC Potential Difference
- Corrosion
- Bonding and Grounding
- DC Power Port

Test Technology/Description:**Test Method(s)/Standard(s):**

Electrostatic Discharge

MIL-STD-461, Method CS118;
RTCA/DO-160, Section 25 (ESD);
AIRBUS ABD0100.1.2, Section 3.5 (ESD) Susceptibility;
BOEING D6-16050-4, Section 7.1 (ESD) Susceptibility;
BOEING D6-16050-5, Section 7.1 (ESD);
BOEING D6-16050-6, Section 7.1;
GR-1089-CORE

Telecommunications Tests:

AC Fault

GR-771-CORE;
GR-902-CORE;
GR-950-CORE;
GR-3121-CORE;
GR-3123-CORE;
GR-3125-CORE

Backscatter, Attenuation

GR-13-CORE;
GR-326-CORE;
GR-771-CORE;
GR-950-CORE;
GR-3120-CORE;
GR-3121-CORE;
GR-3123-CORE;
GR-3125-CORE

ANSI/SCTE 03 - Test Method for Coaxial Cable Structural Return Loss;
ANSI/SCTE 04 - Test Method for "F" Connector Return Loss;
ANSI/SCTE 05 - Test Method for "F" Connector Return Loss In-line Pair;
ANSI/SCTE 44 - Test Method for DC Loop Resistance;
ANSI/SCTE 47 - Test Method for Coaxial Cable Attenuation;
ANSI/SCTE 48-1 - Test Method for Measuring Shielding Effectiveness of Passive and Active Devices Using a GTEM;
ANSI /SCTE 48-3 - Test Procedure for Measuring Shielding Effectiveness of Braided Coaxial Drop Cable Using the GTEM Cell;
ANSI/SCTE 49 - Test Method for Velocity of Propagation;
ANSI/SCTE 63 - Test Method for Voltage Withstand of Outer Jacket;
ANSI/SCTE 66 - Test Method for Coaxial Cable Impedance;
ANSI/SCTE 70 - Insulation Resistance Megohmmeter Method;
ANSI/SCTE 101 - Test Method for "Mainline" Splice Connector Return Loss;
ANSI/SCTE 103 - Test Method for DC Contact Resistance, Drop Cable to F-Connectors and F81 Barrels;
ANSI/SCTE 108 - Test Method for Dielectric Withstand of Coaxial Cable;
ANSI/SCTE 125 - "Mainline" PIN (Plug) Connector Return Loss;
ANSI/SCTE 144 - Test Procedure for Measuring Transmission and Reflection;
ANSI/SCTE 152 - Test Method for Contact Resistance Measurement of Mainline Plug Interface

Industries served: Telecommunications, Aircraft, Aerospace, Defense, and Electronics

NOTES:

This laboratory is accredited to perform the current revision level, and old revision levels of the standard methods as indicated below:

MIL-STD-461 (E through G), MIL-STD-704 (A through F), MIL-STD-1275 (A through E), MIL-STD-1399 Section 300 (A through B)

RTCA/DO-160 (A through G)

AIRBUS ABD0100.1.2 (A through G), AIRBUS ABD0100.1.8 (A through E),

AIRBUS ABD0100.1.8.1 (A through C)

BOEING D6-16050-4 (A through F), BOEING D6-16050-5 (A through C), BOEING D6-16050-5 (A through C)



Accredited Laboratory

A2LA has accredited

ELEMENT MATERIALS TECHNOLOGY MINNEAPOLIS LLC

Minneapolis, MN

for technical competence in the field of

Electrical 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 13th day of August 2019

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

Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 1719.02
Valid to August 31, 2021

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