SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

CKC LABORATORIES, INC.
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MECHANICAL

Valid to: March 31, 2025 Certificate Number: 0803.09

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

Test Description/ Parameters[1]	**Methods**[2]
Salt Fog/Salt Spray	IEC 60068-2-52; EN 60068-2-52; ASTM B117; ASTM B1117-19; ASTM B117-11; DIN 50021:1988; IEC 60945 Section 8.12; EN 60945 Section 8.12; MIL-STD-202 Method 101E; MIL-STD-810 Method 509; RTCA/DO-160 Section 14 (Category S and T); RTCA/DO-380 Section 14 (Category S and T); DNVGL-CG-0339 / DNV-CG-0336 Section 3.10; IACS UR E10 Section 12
Dust	IEC 60068-2-68; EN 60068-2-68; IEC 60529 Section 13; EN 60529 Section 13; JDQ 53.3:2011; MIL-STD-202 Method 110A; MIL-STD-810 Method 510, Procedure I and II; RTCA/DO-160 Section 12.4 (Category D and S); RTCA/DO-380 Section 12.4 (Category D and S)
High and Low Temperature: (-77 to 177) °C	IEC 60068-2-1; EN 60068-2-1; IEC 60068-2-2; EN 60068-2-2; IEC 60945 Sections 8.2, 8.4; EN 60945 Sections 8.2, 8.4; JDQ 53.3:2011; MIL-STD-202 Method 108A; MIL-STD-810 Methods 501, 502, 521; RTCA/DO-160 Sections 4.5, 5, 24 (Category A & C); RTCA/DO-380 Sections 4, 5, 24 (Category A & C); DNVGL-CG-0339 / DNV-CG-0336 Sections 3.7 and 3.9; IACS UR E10 Sections 5 and 11; UN ST/SG/AC.10/11/Rev. 7 Section 38.3.4.2

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Test Description/ Parameters[1]	**Methods**[2]
Humidity	IEC 60068-2-30; EN 60068-2-30; DIN 50017:1982; IEC 60945 Sections 8.3; EN 60945 Sections 8.3; JDQ 53.3:2011; MIL-STD-202 Methods 103B and 106G; MIL-STD-810 Method 507; RTCA/DO-160 Section 6; RTCA/DO-380 Section 6; DNVGL-CG-0339 / DNV-CG-0336 Section 3.8; IACS UR E10 Section 6
Thermal Shock:	IEC 60068-2-14 Tests Na, Nb; EN 60068-2-14 Tests Na, Nb; IEC 60945 Sections 8.5; EN 60945 Section 8.5; JDQ 53.3:2011; MIL-STD-202 Method 107G; MIL-STD-810 Method 503
Vibration: Up to 15000 lbf (3 to 2,500) Hz Acceleration up to 50 g	IEC 60068-2-6; EN 60068-2-6; IEC 60068-2-64; EN 60068-2-64; IEC 60945 Section 8.7; EN 60945 Section 8.7; JDQ 53.3:2011; MIL-STD-167:1993; MIL-STD 202 Methods 106G and 201A, Method 204D, 214A; MIL-STD-810 Methods 514 and 516, Procedures IV and VI; RTCA/DO-160 Section 8; RTCA/DO-380 Sections 8, 9; DNVGL-CG-0339 / DNV-CG-0336 Section 3.6; IACS UR E10 Section 7; UN ST/SG/AC.10/11/Rev.7 Section 38.3.4.3
Shock: Up to 100 *g*; 1/2 Sine < 1 ms to 35 m/s at Terminal Peak	IEC 60068-2-27; EN 60068-2-27; JDQ 53.3:2011; MIL-STD- 202 Method 213B (higher levels need drop tower); MIL-STD-810 Method 514; MIL-STD-810 Method 516, Procedures I, II, III, and V; RTCA/DO160 Sections 7.2, 7.3.1; RTCA/DO-380 Section 7
Altitude up to 75,000 feet	IEC 60068-2-13; EN IEC 60068-2-13; MIL-STD-810 Method 500; RTCA/DO-160 Section 4.6; RTCA/DO-380 Section 7; UN ST/SG/AC.10/11/Rev.7 Section 38.3.4.1
Acceleration/Crash Safety (0 to 20) g	IEC 60068-2-7; EN 60068-2-7; MIL-STD-810 Method 513; RCTA/DO-160 Section 7.3.3

Test Description/ Parameters[1]	Methods[2]
Immersion	IEC 60945 Section 8.9; EN 60945 Section 8.9; JDQ 53.3:2011; MIL-STD-810 Method 512; IEC 60529 Section 14.2.7 and 14.2.8
Explosive Atmosphere	MIL-STD-810 Method 511; RTCA/DO-160 Section 9
Icing/Freezing Rain	MIL-STD-810 Method 521; RTCA/DO-160 Section 24; RTCA/DO-380 Section 24
Contamination by Fluids/Fluid Susceptibility	IEC 60068-2-45; EN 60068-2-45; JDQ 53.3:2011; MIL-STD-810 Method 504; RTCA/DO-160 Section 11; RTCA/DO-380 Section 11
Drop Test	IEC 60945 Section 8.6.1; EN 60945 Section 8.6.1
Static Abuse Load Test	RTCA- DO-313 Section 4.2a
Dynamic Ball Impact Test	RTCA- DO-313 Section 4.2b; EN 61965; IEC 61965
Tilt Test	IEC 60092-504; DNVGL-CG-0339 / DNV-CG-0336 Section 3.11; IACS UR E10 Section 8
Waterproofness	IEC 60068-2-18; EN 60068-2-18; IEC 60529 Section 14; EN 60529 Section 14; JDQ 53.3:2011; RTCA/DO-160 Sections 10.3.1, 10.3.3, 10.3.4
Mixed Flowing Gas	ASTM B845; ASTM B827; IEC 60068-2-60; EN 60068-2-60; Ford ES-2L2T-14K147-AA:2001; JDQ 53.3:2011; Honda 8A00Z-T20-0000:2020, Durability Performance §5, Test 7; Honda 8A00Z-30AA-0000:2020, Durability Performance §5 Test 7; Honda 8A00Z-30A-0000: 2021, Durability Performance §5 Test 7; Mercedes MBN LV 124-2:2013 Section 14.18 (K-18)
Flammability	14 CFR Part 25, Appendix F, Part 1; DOT/FAA/AR-00/12 Sections 1.0, 2.0, 3.0, 4.0; RTCA/DO-160 Section 26.6; RTCA/DO-380 Section 26

For the following types of industries:
Aerospace; Defense; Telecommunications; Electrical; Electronics; Automotive; Information Processing and Scientific Instruments.

[1] Also using customer specific test methods utilizing any combination of test equipment parameters listed above.

[2] When the date, edition, version, etc. is not identified in the scope of accreditation, laboratories may use the version that immediately precedes the current version for a period of one year from the date of publication of the standard measurement method, per part C., Section 1 of A2LA *R101 - General Requirements-Accreditation of ISO-IEC 17025 Laboratories*.

Accredited Laboratory

A2LA has accredited

CKC LABORATORIES, INC.

Bothell, WA

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 13th day of June 2023.

Mr. Trace McInturff, Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 0803.09
Valid to March 31, 2025

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