SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

imat automotive technology services, inc.
(Formerly CROSS TECHNOLOGIES, INC dba CROSS)
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MECHANICAL

Valid To: October 31, 2026 Certificate Number: 5095.02

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following environmental, mechanical, and non-destructive tests and calibrations:

Test	Test Method(s)
Airbag Deployment Testing (Environmental) (-40 to 95) °C	BMW PR 7 007 983, QS 72013; Daimler A002 005 04 99; VW PV 3546, 3545; Tesla TM 2550
Temperature & Humidity Cycling (Environmental) (-73 to 190) °C (10 to 95) % RH	BMW PR 292, 308; BMW TP 303; Ford FLTM BQ 104-7: Method 2; GMW 14124 Cycles: H, M, N, P, & S; DIN 53497; VW TL 527; PV 1200; 2005A; Daimler DBL 5471; Tesla TP 0000706; SAE USCAR 21-4 Sec 4.5.2, SAE USCAR 38 Sec 4.5
Sun Simulation (-70 to 174) °C (10 to 95) % RH	BMW PR 306; DIN 75220; MIL-STD-810
Xenon Arc (UV Fluorescent) (Irradiance: 0.25 W/m^1 to 0.68 W/m^1 @340 nm 20 W/m^1 to 125 W/m^1 @300 – 400 nm) (BST & BPT Temperature: Up to 120 °C) (Relative Humidity: Up to 95%)	ASTM D2565 Cycle 1, 5071 Cycle 1 & 2; ASTM G151, 155 Cycle 1; DIN EN ISO 4892-1, 4892-2 Table B.2
Ash Content by Muffle Furnace/High Temp Exposure	ASTM D2584, D5630 Method B;

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Test	Test Method(s)
(175 to 1100) °C	DIN EN ISO 3451-1 Method A
Salt Fog (25 to 60) °C	ASTM B117; DIN EN ISO 9227; MIL-STD-810
CASS (25 to 70) °C	ASTM B368; DIN EN ISO 9227
Condensing Humidity (100 % Relative Humidity)	DIN EN ISO 6270-2; ASTM D2247
Vibration: (5 to 4000) Hz 112 g Stroke 3 in 8 000 lbf (-73 to 163) °C (10 to 95) % RH	BMW PR 309
Tensile, Compression, & Elongation at Break with Extensometer 0.05 N to 100 kN	ASTM E8/E8M, A370, B557, D638; DIN 53357; DIN EN 895, 10002-5, 1464, 28510-1; DIN EN ISO 527-1, 527-3, 844, 1421
Flexural Strength 0.05 N to 100 kN	DIN EN ISO 178; ASTM D790
Flammability Horizontal	FMVSS 302; 49 CFR 571.302; GMW 3232; BMW GS97038; DIN 75200; VW TL1010; VW PV 3357; Daimler DBL 5307; GB 8410; VOLVO VCS 5031,19; VOLVO STD 104-0001; TOYOTA BS DM 0500; SAE J369
Impact Resistance	DIN EN ISO 6272-1

Test	Test Method(s)
Color	C.I.E. L*A*B*; SAE J1545; ASTM D2244, E1349, E1331; DIN 5033-4, 53236; DIN EN ISO 11664-4
Gloss (20/60/85)°	ASTM D523; DIN EN ISO 2813
Surface Energy (36 to 53) mN/m	DIN ISO 8296; ASTM D2578
Cross Hatch/Adhesion (1 to 100) %	ASTM D3359; BMW GS 97051; DIN EN ISO 2409
Density	DIN EN ISO 845, 1183-1; ASTM D792
Stability and Shrinkage	BMW PR 292
Odor	VDA 270; BMW PR 292
Cleaning Test/Resistance to Media/Chemical Resistance	BMW PR 292
Photogrammetry	Measurement per customer spec.
Colorfastness of Textiles (D65, CWF/F2, Hor)	DIN EN ISO 105-E01, 105-E03, 105-E04; AATCC-TM15 against perspiration; DIN EN 20105-A02
Material Thickness (Up to 25) mm	ASTM D1777; ASTM D751
Coating Thickness/Dry Film Thickness – Paint/Non-Metallic (Up to 60) mils	ASTM D7091; DIN EN ISO 2808, 2360, 2178
Abrasion Resistance - Taber	ASTM D3884, D4060 DIN EN ISO 5470-1
Durometer Hardness (Shore A)	ASTM D2240; DIN ISO 48-4

Test	Test Method(s)
Electrical Testing	
Dry Circuit Resistance	SAE USCAR 21-4 Sec. 4.5.3, SAE USCAR 38 Sec. 4.7.1
Voltage Drop (5 – 100) Amps Source	SAE USCAR 21-4 Sec. 4.5.6, SAE USCAR 38 Sec. 4.7.2
Dielectric Test/Withstanding Voltage (0.6 to 6) kVDC Source (0.5 to 5) kVAC Source (0.6 to 6) mADC Measure (2 to 20) mAAC Measure	Fiat Chrysler PF90051 Sec. 6.4.4

Calibration

I. Thermodynamics

Parameter/Equipment	Range	CMC (±)[1]	Comments
Temperature – Measure[2]	(-196 to 420) °C (-70 to 180) °C	0.06 °C 0.73 °C	Fluke 1524 w/PRT Vaisala HMP77B
Temperature – Measure Equipment	(-40 to 130) °C (0 to 110) °C (50 to 350) °C	0.84 °C 0.29 °C 0.74 °C	Fluke 1524 w/probe & chamber
Relative Humidity – Measure[2]	(10 to 90) % RH (90 to 95) % RH	1.5 % 2.2 %	Vaisala HMP77B

[1] Calibration and Measurement Capability Uncertainty (CMC) is the smallest uncertainty of measurement that a laboratory can achieve within its scope of accreditation when performing more or less routine calibrations of nearly ideal measurement standards or nearly ideal measuring equipment. CMC's represent expanded uncertainties expressed at approximately the 95 % level of confidence, usually using a coverage factor of $k = 2$. The actual measurement uncertainty of a specific calibration performed by the laboratory may be greater than the CMC due to the behavior of the customer's device and to influences from the circumstances of the specific calibration.

[2] Field calibration service is available for this calibration. Please note the actual measurement uncertainties achievable on a customer's site can normally be expected to be larger than the CMC found on the A2LA Scope. Allowance must be made for aspects such as the environment at the place of calibration and for other possible adverse effects such as those caused by transportation of the calibration equipment. The usual allowance for the actual uncertainty introduced by the item being calibrated, (e.g. resolution) must also be considered and this, on its own, could result in the actual measurement uncertainty achievable on a customer's site being larger than the CMC.

Accredited Laboratory

A2LA has accredited

imat automotive technology services, inc.

Greenville, SC

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 27th day of December 2024.

Mr. Trace McInturff, Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 5095.02
Valid to October 31, 2026

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