



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

RELIABLE ANALYSIS – SHANGHAI, INC.  
No. 10, 12A, 24, 26 Lane 1365  
Kang Qiao Road East  
Shanghai, People’s Republic of China, 201319  
Mr. Victor Wen Phone: 86 21 6818 3293

MECHANICAL

Valid To: May 31, 2027

Certificate Number: 0386.04

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following tests on adhesives, coatings (paints), deadeners, elastomers, foams, foundation board, metal, automotive paperboard, plastics, rubber, sealers, tapes, and automotive textiles:

<b><u>Test:</u></b>	<b><u>Standard:</u></b> <sup>2</sup>
Abrasion Resistance / Wear Resistance	ASTM D3884; ASTM D4060; ASTM D4157; ISO 12947-1; ISO 12947-2; ISO 12947-3; ISO 12947-4; ISO 5470-2 (except Sec. 5.2.2); SAE J365; SAE J948; SAE J1530; Chrysler LP-463KB-06-01; Chrysler LP-463KB-21-01; FLTM BN 108-02; GMW 3208; GMW 3283; GMW 15487
Acid Spotting Resistance	FLTM BI 113-02
Adhesion Test	ASTM D3359; FLTM BI 106-01; FLTM BI 106-02; GMW 14829; VCS 1029, 54739; VCS 1029, 54729; ISO 2409; GB/T9286; ASTM B571
Adhesive Strength	FLTM BN 151-01; GMW14892
Aldehyde and Ketonic Emission Test	GMW15635; PV 3925; VDA 275; VCS 1027,2739
Ash Content	ISO 3451-1 (Method A)

**Test:****Standard:**<sup>2</sup>

Bleeding, Perspiration, and Water Spotting

FLTM AN 101-01;  
GMW14102

Blocking Resistance

GMW14132

Bond Strength

Chrysler LP-463LB-10-01 (except Proc. C);  
FLTM BN 121-01;  
GMW3220;  
ISO 11339

Breaking Strength

ASTM D2208, D5034;  
ASTM D5035 (Strip Method)

Corrosion

ASTM B117; ASTM B368;  
IEC 60068-2-11; IEC 60068-2-52;  
ISO 9227; ISO 16750-4, (Sec. 5.5);  
FLTM BI 103-01; FLTM BQ 105-01;  
GMW 3286; GMW 14458; GMW 14872;  
GMW 3172 (Sec.9.4.7, 9.4.8);  
VCS 1027,1449;  
CETP:00.00-L-467;  
CORWHEEL; 7734COR;  
CORMUD; TP-0000808;  
CORCHROME;  
VCS 1027,149;  
STD 4319

Chemical Resistance

SAE J913;  
FLTM BO-101-05;  
GMW 3402; GMW 14333; GMW 14334;  
GMW 14445; GMW 14701;  
TP-0000703;  
Ford DVM 0036; FORD DVM 0039

Chip Resistance (Gravelometer)

SAE J400;  
GMW 14668; GMW 14700;  
DIN 55996;  
ISO 20567;  
VCS 1024,7136;  
FLTM BI 157-06;  
TPJLR.52.5991M<sup>3</sup> Chamber MethodISO 12219-4;  
PV3942;  
VCS 1027, 2769

Cleanability and Soilability

GMW3402;  
Chrysler LP-463KC-04-01;  
FLTM BN 112-08

Cold Cracking Resistance

GMW14126; GMW 14127 (Part A)

Color Measurement

ASTM D2244;  
GMW 4750;  
SAE J1545

**Test:****Standard:**<sup>2</sup>

Color Migration	ISO 15701
Colorfastness	AATCC 23; ISO 105-G02; AATCC Method 107
Compression Load Deflection	ISO 3386
Compression	ASTM D3574 (Method D); ISO 815-1; ISO 1856; ISO 3386-1
Connector Installation Abuse	GMW 3172 (Sec. 9.3.8, 9.3.9)
Connector and Terminal Mechanical Tests	GMW 3172 (Sec. 9.3.7); GMW 3191 (Sec. 4.2.3, 4.2.4, 4.2.5, 4.2.7, 4.2.18, 4.2.19, 4.2.20)
Crocking	AATCC Method 8; ASTM D6279; ISO 105-X12; ISO 20433; ISO 11640; PV 3906; FLTM BN 107-01/02; Chrysler LP-463PB-54-01; SAE J861
Cross Section and Inspection	GMW3172 (Sec. 6.6)
Crush For Housing	GMW3172 (Sec. 9.3.5, 9.3.6)
Cure Test	GMW 14867; GMW 15891; Chrysler LP-463PB-31-01
Density	ASTM D1475; FLTM BN 106-01; ISO 1183-1 (Method A)
Determining the Tackiness of Polypropylene Parts	PV 1306; PES 11040
Dimensional Check	GMW3172 (Sec. 6.7)
Dimensional Stability	ISO 17130; GMW3262 (Sec. 3.2.8), 4217, 14444 (Sec. 3.4.11); FLTM BN 105-01
Distinctness of Image (DOI)	VCS 1026, 52749; ASTM D5767
Determination of Crack and Pore Number	ASTM B456; ASTM B604
Drop	ISO 16750-3 (Sec. 4.3); GMW 3172: 2018 (Sec. 9.3.10)

<u>Test:</u>	<u>Standard:</u> <sup>2</sup>
Effect Amines	GMW 14131; VDA 230-223
ELV	IEC 62321; IEC 62321-1; IEC 62321-2; IEC 62321-3; IEC 62321-4; IEC 62321-5; IEC 62321-6; IEC 62321-7-1; IEC 62321-7-2; ISO 22262-1; ISO 22262-2 QC/T 941; QC/T 942; QC/T 943; QC/T 944; Q/JLY J7110808; GB/T 23263; AfPS GS 2019:01 PAK
Emission of Chamber Method	TS-BD-003, PES11081; SMTC 5 400 018; ISO 12219-2; ISO 12219-4; FLTM BZ-108-01; 01.12-L-10661; TP-0001008; PV3942; VCS 1027,2769
Emissions of Materials	ISO 12219-3; GMW 15634; GMW 15635; PV 3341; PV 3925; VDA 275; VDA 277; VDA 278; TPJLR.52.104; VCS 1027,2739; VCS 1027,2749; VCS 1027,2759
Environmental Cycle	ASTM D3012; ISO 188 (Method B), ISO 4577; ISO 6270-2; ISO 15512 (Method A); ISO 16750-4, Secs. 5.1, 5.2, 5.3, 5.4, 5.6, 5.7; PV2005; TP-0000706; GMW3286; GMW 14124; GMW 14729; GMW 14668 (Sec. 3.4.7, 3.4.8, 3.4.9); VCS 1027,33759; FLTM BI 104-02 Method A, BQ 104-07; Chrysler LP-463LB-12-01;
Extensibility	VCS 1024,11419
Fabrics	
Test Methods, Coated Fabrics	ASTM D751 (except Secs. 22-25, 41-49, 54-63, 65-70, 89-98); GMW14122
Bow and Skew	ASTM D3882
Fiber Deterioration	GMW3387
Filiform Resistance	GMW15287; SAE J2635; ASTM D2803
Film Thickness	ASTM B487; ISO 1463, 2808; GB/T6462

**Test:****Standard:**<sup>2</sup>

Flammability	FMVSS 302; GB 8410; GMW3232; ISO 3795; SAE J369; VCS 5031,19; TL 1010; TL 1011; UL94
Flex Test / Newark Flex / “W” Flex	ISO 5402
Flexural Strength / Flexural Properties	ASTM D790; ISO 178
Fogging Test	Chrysler LP-463DB-12-01; GMW 3235; PV 3015; SAE J1756; DIN 75201; VCS 1027,2719
Fretting Corrosion Degradation	GMW3172 (Sec. 9.3.11)
FTIR	ASTM E1252 (Sec. 7.9); GB/T 6040
Function	GMW3172 (Sec. 6.1, 6.2, 6.5)
Gloss Measurement	ASTM D523; Chrysler LP-463PB-11-01; FLTM BI 110-01; ISO 2813; VCS 1026,52729
Hardness	ASTM D2240; ISO 48(M); ISO 868; ISO 2039; VDA 675202; DIN 53505
Hydrogen Sulfide Resistance	GMW14864
Impact	ASTM D256, D3763; ISO 179-1; ISO 180; ISO 6603-2; ISO 16750-3 (Sec. 4.3); FLTM BO 151-01; GMW14093; GMW 14127
Mass and Thickness Determination	ASTM D3776 (Option C); ISO 2286-2 (Method A); ISO 2589; ISO 5084; SAE J860 (Mass), SAE J882 (Thickness); GMW3182
Mechanical Shock	ISO 16750-3 (Sec. 4.2.1, 4.2.2); GMW3172 (Sec. 9.3.2, 9.3.3, 9.3.4)

<b><u>Test:</u></b>	<b><u>Standard:</u></b> <sup>2</sup>
Mildew	GMW3259
Mold Shrinkage	ISO 294; ISO 2577
Odor Test	FLTM BO 131-01; FLTM BO 131-03; GMW3205; SAE J1351; VDA 270; VCS 1027,2729; PV 3900; PES11082
Ozone	ISO 1431-1
Peel Strength	ASTM B533 (Method A); ASTM D903; Chrysler LP-463TB-03-01; FLTM BN 151-05; ISO 11644; ISO 8510-2
Perspiration Staining Resistance	Chrysler LP-463KC-21-01; FLTM BI 113-03; GMW 14296; GMW 14334
Permeability of fabrics to air	ISO 9237
Plating Thickness	ISO 1463; ISO 2177; GB/T4955
Protection of electrical equipment against foreign objects, water and access	ISO 16750-4 (Sec. 5.10); ISO 20653; GMW3172 (Sec. 9.5.1, 9.5.2, 9.5.3, 9.5.4, 9.5.5, 9.5.6);
Rubber, Vulcanized or Thermoplastic-Determination of Low-Temperature Brittleness	ISO 812
Scratch and Mar Resistance	ISO 1518; Chrysler LP-463DD-18-01; FLTM BN 108-13; FLTM BO 162-01; GMW3347; GMW14130; GMW14688; GMW14698; PV 3952
Seam Strength	ISO 13935-1
Seam Fatigue	GMW 3405; FLTM BN 106-02
Shear Test	FLTM BU 101-06; FLTM BV 154-03
Sliding Resistance for Side Window Weatherstrips	GMW15683
Softness	GMW14134
Spotting Resistance	FLTM AN 101-01; FLTM BI 113-02;

**Test:**

**Standard:**<sup>2</sup>

	Chrysler LP-463KC-03-01; GMW 14102
STEP Test	ASTM B465; ASTM B764; GMW 14668 (Sec. 3.4.3)
Stretch and Set of Textile and Leather	SAE J855; GMW3211
Temperature/Humidity cycle	ISO16750-4 (Sec. 5.3.1, 5.6); IEC 60068-2-38; IEC 60068-2-14 (Sec. Nb); GMW 3172 (Sec. 6.9, 8.4.1, 9.4.3, 9.4.5, 9.4.9); GMW 3191 (Sec. 4.4.3)
Temperature/Humidity storage	ISO 16750-4 (Sec. 5.1, 5.2, 5.7); IEC 60068-2-1 IEC 60068-2-2; IEC 60068-2-78; GMW3172 (Sec. 8.4.2, 8.4.3, 9.4.1, 9.4.6)3191 (Sec 4.4.1, 4.4.4)
Tensile Strength / Tensile Properties	ASTM D412 (Method A, <i>except Secs. 12.2 and 12.3</i> ), ASTM D638; ASTM D882; ASTM D1708; ASTM D2256; ASTM E132; ISO 37; ISO 527; ISO 1421; ISO 1798; Chrysler LP-463CB-08-01; FLTM BN 150-04; GB 10654; GMW3010
Tear Strength / Resistance	ASTM D624 (Die C, <i>except Appendix</i> ); ASTM D1004; ASTM D2261; ASTM D5587; ASTM D5733; ISO 34-1; ISO 3377-1; ISO 4674-1 (Method B); ISO 13934-1; ISO 13937-2; ISO 23910; DIN EN 12127; FLTM BN 150-02; GMW3326; GMW14146
Thermal Shock	FLTM BI 107-05; GMW15919
Thermal Shock (Air to Air/water)	IEC 60068-2-14 (Sec. Na); ISO 16750-4 (Sec. 5.3.2, 5.4); GMW3172 (Sec. 9.4.2, 9.4.4); GMW3191 (Sec. 4.4.2)
Thermomechanical Analysis	ASTM E831; ASTM D1525; ISO 75-1; ISO 75-2; ISO 306; ISO 1133-1; ISO 1133-2; ISO 11357-1; ISO 11357-2; ISO 11357-3; ISO 11358-1; ISO 11358-2; ISO 11359
Vibration	ISO16750-3 (Sec. 4.1); GMW3172 (Sec. 6.8, 9.3.1, 10.3.1);

**Test:**

**Standard:**<sup>2</sup>

	GMW3191 Section 4.4.8
Water Jet	GMW16745; VCS 1029,54719; FLTM BO 160-04
Xenon Exposure	ASTM D7356; ASTM D7869; ISO 105-B06; ISO 105-B06 condition 3; ISO 105-B06 condition 5; ISO 16750-4 Sec. 5.10; PV 1303; SAE J1885 <sup>1</sup> ; SAE J1960 <sup>1</sup> ; SAE J1976; SAE J2412; SAE J2527; FLTM BI 104-02 Method A; FLTM BO 116-01; VDA 75202; GMW 3414; GB 16422; VCS 1027,339; VCS 1027,359; VCS 1027,3379; STD 1026; STD 8242; CC080008-C
Anaerobic/Aerobic biodegradability	AS 5810; GB/T 22047; ISO 17556 GB/T 19276.1; ISO 14851 GB/T 33797; ISO 15985

<sup>1</sup> NOTE: This laboratory's scope contains withdrawn or superseded methods. As a clarifier, this indicates that the applicable method itself has been withdrawn or is now considered "historical" and not that the laboratory's accreditation for the method has been withdrawn.

<sup>2</sup> 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 test method, per Annex A, Part C of A2LA R101 - *General Requirements: Accreditation of Conformity Assessment Bodies*.



## Accredited Laboratory

A2LA has accredited

### RELIABLE ANALYSIS (SHANGHAI), INC.

*Shanghai, People's Republic of China*

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 16<sup>th</sup> day of September 2025.

A blue ink signature of Mr. Trace McInturff, written in a cursive style.

Mr. Trace McInturff, Vice President, Accreditation Services  
For the Accreditation Council  
Certificate Number 0386.04  
Valid to May 31, 2027

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