



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

RELIABLE ANALYSIS – SHANGHAI, INC.
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MECHANICAL

Valid To: May 31, 2013

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:

<u>Test</u>	<u>Standard</u>
Abrasion Resistance / Wear Resistance Taber	ASTM D3884, D4060; Chrysler LP-463KB-21-01; FLTM BN 108-02; GM 9515P; GME 60345, 60400; GMW 3208, 15487
Schopper	GMW 3283
Wyzenbeek	Chrysler LP-463KB-06-01; GM 9082P; SAE J948, J1530
Acid Spotting Resistance	FLTM BI 113-02
Adhesion Test	ASTM D3359; FLTM BI 106-01, -02; GM 9071P, 9502P; GMW 14829
Adhesive Strength	FLTM BN 151-01; GM 3602M (Sec. 3.5)
Ash Content	ASTM D2584; ISO 3451-1 (Method A)
Asphalt Staining of Exterior Plastics	Chrysler LP-463PB-57-02
Bleeding, Perspiration and Water Spotting	FLTM AN 101-01

<u>Test</u>	<u>Standard</u>
Blocking Resistance	GMW 14132
Bond Strength	Chrysler LP-463LB-10-01 (<i>except Proc. C</i>); FLTM BN 121-01; GMW 3220
Breaking Strength, Grab Method	ASTM D2208, D5034
Breaking Strength and Elongation	ASTM D5035 (Strip Method)
Brittleness by Means of a Mandrel	GM 9503P
CASS Corrosion	ASTM B368; FLTM BQ 105-01; GM 4476P
Cellular Material Urethane Foams	ASTM D3574 (<i>except Secs. 23-29, 76-112</i>)
Charpy Impact	ASTM D256; ISO 179
Chemical Resistance	FLTM BO-101-05; GM 9900P; GMW 3402, 14333, 14701
Chip Resistance (Gravelometer)	GM 9508P; SAE J400; GMW 14668, 14700
Cleanability	GM 9126P
Cleanability and Soilability	Chrysler LP-463KC-04-01; FLTM BN 112-08
Cold Cracking Resistance	ASTM D1912; GM 9140P (Part A); GMW 14126, 14127 (Part A)
Color Change Due to Temperature and Humidity	GM 9131P
Color Measurement	ASTM D2244; GMW 4750; SAE J1545
Color Migration	ISO 15701; GMW 14069
Colorfastness to Crocking	AATCC Method 8; GM 9033P; ISO 105-X12, 20433, 11640; PV 3906
Colorfastness to Light	AATCC Method 16
Colorfastness to Water	AATCC Method 107

<u>Test</u>	<u>Standard</u>
Compression Load Deflection	ISO 3386
Compression Set	ASTM D3574 (Method D); ISO 1856, 3386-1
Crazing of Vinyl Material	GM 9143P
Crocking	FLTM BN 107-02
Crock Mar Resistance	Chrysler LP-463PB-54-01; FLTM BN 107-01; SAE J861
Cure Test	GM 9509P; GMW 14867, 15891
Cyclic Corrosion Test	GMW 14872
Density	ASTM D1475; FLTM BN 106-01; ISO 1183-1 (Method A)
Dime Scrape	GM 9506P
Dimensional Stability	GMW 4217, 14444 (Sec. 3.4.11)
Determination of Crack and Pore Number	ASTM B456, B604
Effect Amines	GMW 14131
Environmental Cycle	Chrysler LP-463LB-12-01; FLTM BQ 104-07; GM 9200P, 9505P; GMW 3286, 14124, 14729; ISO 188
Fabrics	
Test Methods, Coated Fabrics	ASTM D751 (<i>except Secs. 22-25, 41-49, 54-63, 65-70, 89-98</i>); GMW 14122, 14231
Length	ASTM D3773 (Option A)
Width	ASTM D3774 (Option B)
Fabric Count	ASTM D3775
Mass	ASTM D3776 (Option C)
Bow and Skew	ASTM D3882
Weight Loss	GM 9337P
Fiber Deterioration	GM 9771P; GMW 3387
Filiform Resistance	GMW15287; SAE J2635
Film Thickness	ISO 2808

<u>Test</u>	<u>Standard</u>
Flammability	FMVSS 302; GB 8410-2006; GM 9070P; GMW 3232; ISO 3795; SAE J369
Flex Test / Newark Flex / "W" Flex	ASTM D2097; FLTM BN 102-02; GM 9226P; ISO 5402
Flexibility of Automotive Textiles	GMW 3390
Flexural Strength / Flexural Properties	ASTM D790; ISO 178
Fogging Test	Chrysler LP-463DB-12-01; GM 9305P; GME 60326; GMW 3235; PV 3015; SAE J1756; SMC 30157
Aldehyde and Ketonic Emission Test	GMW 14236, 15635; GME 60271; PV 3925; SMC 30155; VDA 275
Friction Test	ASTM D1894; FLTM BN 014-03
Gloss Measurement	ASTM D523; Chrysler LP-463PB-11-01; FLTM BI 110-01; ISO 2813
Heat Deflection Temperature (HDT)	ISO 75, 306
Hydrogen Sulfide Resistance	ASTM D1712; FLTM AN 102-01; GM 9069P; GMW 14864; SAE J322
Immersion	FLTM BI 104-04
Impact Resistance	FLTM BO 151-01; GM 9032P, 9300P; GMW 14093, 14127
Izod Impact	ASTM D256; ISO 180
Lint Pickup and Lint Retention	GM 9139P

<u>Test</u>	<u>Standard</u>
Lint Retention	GMW 3347
Loop Pullout	GM 9127P
Mandrel Bend	GM 9503P (Sec. 12)
Mass and Thickness Determination	GMW 3182; ISO 2589, 5084; SAE J860 (Mass), J882 (Thickness)
Melt Mass Flow and Melt Volume Flow (MFR & MVR)	ISO 1133
Mildew	GMW 3259
Mold Shrinkage	ISO 294, 2577
Multi-axial Impact	ASTM D3763; GM 9904P; ISO 6603
Odor Acceptability	GM 9832P
Odor Test	FLTM BO 131-01, BO 131-03 GME 60276; GMW 3205; SAE J1351
Peel Strength	ASTM B533, D903; Chrysler LP-463TB-03-01; FLTM BN 151-05; GM 9797P; ISO 11644, 8510-2
Perspiration Staining Resistance	Chrysler LP-463KC-21-01; FLTM BI 113-03; GM 9240P, 9517P; GMW 14296, 14334
Plating Thickness	ISO 1463, 2177
Pliability	GM 9151P, 9664P
Poisson's Ratio	ASTM E132
Quick Thermal Cycle	GMW 14668
Saw Grind Adhesion Test	ASTM B571
Salt Spray Tests	ASTM B117; FLTM BI 103-01; GMW 14458, 3286; ISO 9227

<u>Test</u>	<u>Standard</u>
Scratch and Mar Resistance	Chrysler LP-463DD-18-01; FLTM BN 108-13; GM 9150P; GMN 3943; GMW 14130, 14688, 14698; PV 3952
Scuffing Resistance	FLTM BN 108-04; GM 9150P; SAE J365
Seam Strength	Chrysler LP-463KB-13-01; GM 9129P
Shear Test	FLTM BU 101-06
Shrinkage Test	FLTM BN 005-02, BN 105-01; GMW 3262 (Sec. 3.2.6)
Softness	GMW 14134
Solvent Wipe Resistance	Chrysler LP-463PB-31-01; GM 9509P
STEP Test	ASTM B465, B764; GMW 14668
Stretch and Set of Textile and Leather	SAE J855; GMW 3211
Suntan Lotion and Insect Repellant	Ford DVM 0036, DVM 0039; GMN 10033; GMW 14445
Temperature Cycle	GMW 14668
Temperature Storage	GMW 14668
Tensile Strength / Tensile Properties	ASTM D412 (Method A, <i>except Secs. 12.2 and 12.3</i>), D638, D882, D1708, D2256; Chrysler LP-463CB-08-01; FLTM BN 150-04; GB 10654-89; GMW 3010; ISO 37, 527, 1798
Tear Strength / Resistance	ASTM D624 (Die C, <i>except Appendix</i>), D1004, D2261, D5587, D5733; FLTM BN 150-02; GM 9149P; GMW 14146; ISO 13937-2
Thermal Shock	FLTM BI 107-05; GM 9525P; GMW 15919

<u>Test</u>	<u>Standard</u>
Thumbnail Hardness	GM 9507P
TVOC Test	PV 3341; Q/SQR.04.098; SMC 30158; TS-INT-002; VDA 277
Vicat Softening	ISO 306
Water Immersion	FLTM BI 104-01
Water Jet	GM 9531P (Method B)
Water Spotting and Soap Spotting Resistance	Chrysler LP-463KC-03-01; FLTM AN 101-01; GM 9133P
Water Vapor Permeability	GMW 14140
Weight Solid	FLTM BI 102-01
Wicking Test	GM 9176P; SAE J913
Xenon Exposure	AATCC Method 16; GME 60292; GMW 3414; ISO 105-B06; PV 1303; SAE J1885, J1960, J2412, J2527



The American Association for Laboratory Accreditation

World Class Accreditation

Accredited Laboratory

A2LA has accredited

RELIABLE ANALYSIS - SHANGHAI, INC.

Shanghai, CHINA

for technical competence in the field of

Mechanical Testing

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005 *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 8 January 2009*).

Presented this 4th day of October 2011.



A handwritten signature in black ink, reading "Peter Abaya".

President & CEO
For the Accreditation Council
Certificate Number 0386.04
Valid to May 31, 2013

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