SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

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MECHANICAL

Valid To: June 30, 2024 Certificate Number: 1959.01

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following tests using automotive components on Fiberglass, Metals, Plastic, Rubber and Textiles:

	TEST STANDARD	DESCRIPTION
ACOUSTIC		
	ISO 9053, Method A	Determination of Airflow Resistance
ADHESIVE		
	ASTM D751, Sect. 45 - 48	Adhesion of Coating to Fabric
	LP-463TB-10-01	Determination of Shrinkage for Pressure Sensitive Tapes and Films
ADHESIVE **Peel Adhesion**		
	ISO 8510-1	Peel Test for a Flexible-Bonded-To-Rigid Test Specimen Assembly, Part 1: 90° Peel
	ISO 8510-2	Peel Test for a Flexible-Bonded-To-Rigid Test Specimen Assembly, Part 2: 180° Peel
	SAE J1679	Peel Strength of Soft Trim Adhesives
	WSS-M99P32-D1;* D6 Sect. 3.9.5; 3.7.5	Peel Strength (Laminates)
	WSS-M99P32-E1; E6 Sect. 3.8.5; 3.7.5	Peel Strength (Laminates Only); Peel Strength (All Laminates)
	WSS-M99P32-E2,3,4,5 Sect. 3.3.12	Peel Strength (Laminates Only with Bonded, Non-Needled Attachment)
	WSS-M99P32-D2,3,4,5* Sect. 3.3.12, 3.4.7	Peel Strength (Laminates)
	LP-463TB-03-01	Determination of Peel Strength and Adhesion for Tapes and Films
	ASTM D903	Standard Test Method for Peel or Stripping Strength of Adhesive Bonds
	FLTM BN 151-05	Determination of 180 Degree Peel Adhesion Strength of Laminates
	ASTM D3330, Method F	Peel Adhesion of Pressure Sensitive Tape

	TEST STANDARD	DESCRIPTION
COMPRESSION		
	SAE J1352	Compression and Recovery of Insulating Paddings
	SAE J1355	Test Method for Measuring Thickness of Resilient Insulating Pads
	SAE J883	Test Method for Determining Dimensional Stability of Automotive Textile Materials
ENVIRONMENTAL Cycling		
	ASTM D3884	Abrasion Resistance of Textile Fabrics (Rotary Platform, Double-Head Method)
	GMW14700, Method B and C	Stone Impact Resistance of Coatings
	SAE J400, Sect. B, C	Test for Chip Resistance of Surface Coatings
	LP-463TB-09-01	Cold Impact Testing - Bonded Moldings, Die-Cast Ornaments, and Appliques
	SAE J323, A	Determining Cold Cracking of Flexible Plastic Materials
	SAE J1389	Corrosion Test for Insulating Materials
	SAE J1530, Sect. 3,4	Determining Resistance to Fiber Loss, Resistance to Abrasion and Bearding of Automotive Carpet Materials (Taber)
	ASTM D573	Standard Test Method for Rubber-Deterioration in an Air Oven
	GM9200P, Sect. 4.1*	Accelerated Aging and Steaming
	GMW16225, Table 2	Resistance to Temperature – Humidity Cycling
	LP-463CB-10-01	Heat, Humidity and Cold Aging Test for Adhesives
	WSS-M99P32-D1* Sect. 3.8.2	Environmental –Heat, Humidity and Cold
	WSS-M99P32-E1 Sect. 3.7.2.1	Short Term Environmental Cycling
	WSS-M99P32-D2,3,4,5* Sect. 3.4.4.1	Environmental – Short Term Heat, Humidity and Cold
	WSS-M99P32-E2,3,4,5 Sect. 3.3.15.1	Short Term Heat, Humidity and Cold
	WSS-M99P32-F2, F3 Sect. 3.3.15.1	Short Term Heat, Humidity and Cold
	WSS-M99P32-F4, F5 Sect. 3.3.15.1	Short Term Heat, Humidity and Cold
	WSS-M99P32-D6* Sect. 3.6.2.1	Environmental – Engine, Underbody and Tunnel – Short Term Heat, Humidity and Cold
	WSS-M99P32-E6 Sect. 3.6.2	Short Term Environmental Cycling
	GMW14124, Cycle H and Cycle M	Environmental – Dimensional Stability Test Cycle
	GMW16653, Sect 3.4.3	Cold Temperature Resistance
	GMW14729, Option B	High Humidity Test
	NES M0132	Methods of Thermal Cycle Testing for Plastic Parts

	TEST STANDARD	DESCRIPTION
ENVIRONMENTAL Fogging		
	GMW3235	Fogging
	LP-463DB-12-01	Fogging Resistance of Interior Materials
	SAE J1756	Test Procedure to Determine the Fogging Characteristics of Interior Automotive Materials
ENVIRONMENTAL Heat Aging		
	GMW16225, Table 2	Resistance of Material to Heat Aging
	WSS-M99P32-E1 Sect. 3.7.2.2	Long Term Environmental Cycling
	WSS-M99P32-E6 Sect. 3.6.3	Long Term Environmental
	WSS-M99P32-D1* Sect. 3.8.3	Interior Assemblies –Heat Aging
	WSS-M99P32-D2,3,4,5* Sect. 3.4.4.2	Long Term Heat Exposure
	WSS-M99P32-E2,3,4,5 Sect. 3.3.15.2	Long Term Heat Exposure
	WSS-M99P32-F2, F3 Sect. 3.3.15.2	Long Term Heat Exposure
	WSS-M99P32-F4, F5 Sect. 3.3.15.2	Long Term Heat Exposure
	WSS-M99P32-D6* Sect. 3.6.2.2	Engine, Underbody and Tunnel – Heat Aging
	GMN10046, Sect. 3.3.1*	Temperature Resistance – Constant Load
	GMN10046, Sect. 3.3.2*	Temperature Resistance – Constant Temperature
	LP-463LB-13-01	Heat Aging of Trim Materials
	LP-463TB-14-01	Softening Point of Adhesive Tapes and Films
	MS-HZ100, Table 3, 3.5	Resistance to Heat Degradation
	MS-HZ100, Table 4, 4.4	Resistance to Heat Degradation
	MS-HZ100, Table 6, 6.1	Resistance to Heat Degradation
	SAE J1361	Hot Plate Method for Evaluating Heat Resistance and Thermal Insulation Properties of Materials
ENVIRONMENTAL Mildew		
	WSS-M99P32-E2,3,4,5 Sect. 3.3.4	Resistance to Mildew
	WSS-M99P32-E6 Sect. 3.31	Resistance to Mildew
	WSS-M99P32-D1; D6* Sect. 3.8.1; 3.6.1	Resistance to Mildew
	WSS-M99P32-E1; E6 Sect. 3.7.1; 3.6.1	Resistance to Mildew
	WSS-M99P32-F2, F3 Sect. 3.3.4	Resistance to Mildew
	WSS-M99P32-F4, F5 Sect. 3.3.4	Resistance to Mildew

	TEST STANDARD	DESCRIPTION
ENVIRONMENTAL Mildew (cont.)		
	WSS-M99P32-F2, F3 Sect. 3.3.15.1	Short Term Heat, Humidity and Cold
	WSS-M99P32-F4, F5 Sect. 3.3.15.1	Short Term Heat, Humidity and Cold
	FLTM BO 040-01 Procedure A	Short Term Environmental Cycling
	FLTM BO 040-01 Procedure B	Long Term Environmental Cycling
	WSS-M99P32-D2,3,4,5* Sect. 3.3.4	Resistance to Mildew
	GMW3259	Mildew
ENVIRONMENTAL Moisture Absorption		
	WSS-M99P32-D1; D6* Sect. 3.9.6; 3.7.6	Moisture Absorption
	WSS-M99P32-E1; E6 Sect. 3.7.6	Moisture Absorption
	WSS-M99P32-D2,3,4,5* Sect. 3.3.5	Moisture Absorption
	WSS-M99P32-E2,3,4,5 Sect. 3.3.5	Moisture Absorption
	WSS-M99P32-F2, F3 Sect. 3.3.5	Moisture Absorption
	WSS-M99P32-F4, F5 Sect. 3.3.5	Moisture Absorption
	WSS-M99P32-F2, F3 Sect. 3.3.17	Water Absorption
	WSS-M99P32-F4, F5 Sect. 3.3.17	Water Absorption
FLAMMABILITY		
	ASTM D3801	Standard Test Method for Measuring the Comparative Burning Characteristics of Solid Plastics in a Vertical Position
	FLTM BN 024-02	Flammability Test for Automotive Interior Materials
	FMVSS 302	Flammability of Interior Materials
	GMW 3232	Flammability
	IEC 60695-2-10	Glowing/hot-wire based test methods - Glow-wire apparatus and common test procedure
	NES M0094	Flammability of Interior Materials for Automobiles
	SAE J369	Flammability if Polymeric Interior Materials-Horizontal Test Method
	UL-94, Sect. 8	50W Vertical Burning Test, V-0, V-1, or V-2
	ISO 3795	Determination of Burning Behavior of Interior Materials
	GB-8410	Flammability of Automotive Interior Materials

	TEST STANDARD	DESCRIPTION
FLEXURAL RIGIDITY		
	ASTM D790	Standard Test Method for Flexural Properties of Reinforced and Unreinforced Plastics and Electrical Insulation Materials
	ISO 178	Determination of Flexural Properties
	GMW16225, Table 1	Flexural Rigidity
	WSS-M99P32-F2/F3, 3.3.11	Flexural Modulus
GLOSS		
	ASTM D523	Gloss
IGNITION LOSS		
	ASTM D4963	Standard Test Method for Ignition Loss of Glass Strands and Fabrics
	ASTM D586A-97 (2002)*, Method A	Standard Test Method for Ash in Pulp, Paper, and Paper Products
	TAPPI T-1013	Loss on Ignition of Fiber Glass Mats
ODOR		
	FLTM BO 131-03	Interior Odor Test
	GMW 3205	Odor
	LP-463KC-9-01	Odor
	SAE J1351	Hot Odor Test for Insulating Materials
REAGENT Chemical Resistance		
	ASTM D896	Standard Test Method for Resistance of Adhesive Bonds to Chemical Reagents
	FLTM BO 101-05	Determination of Fuel Resistance of Plastic Parts
	FLTM BI 168-01, B	Fluid Resistance of Chassis and Exterior Materials for Incidental Exposure
	GMW14194, Sect. 3.11.2	Chemical Resistance
	GMW14334, Code B	Chemical Resistance to Fluids
	GMW14650, Sect. 4.8	Fuel Resistance
	GMW15725, Sect. 4.7	Resistance to Fluids
	ISO 9073-17	Determination of Water Penetration (Spray Impact)
	MS-HZ100, Table 4, 4.6	Fluid Immersion
	MS-HZ100, Table 4, 4.7	Fluid Repellency
	MS-HZ100, Table 4, 4.5	Miscellaneous Engine Fluid Resistance
	SAE J913	Test Method for Wicking of Automotive Fabrics and Fibrous Materials

	TEST STANDARD	DESCRIPTION
REAGENT Chemical Resistance		
	WSS-M99P32-D1; D6* Sect. 3.8.4; 3.6.3	Resistance of Insulators to Various Test Reagents
	WSS-M99P32-E6 Sect. 3.6.4	Resistance of Insulators to Various Test Reagents
	WSS-M99P32-D2,3,4,5* Sect. 3.3.8.1	Resistance of Insulators to Various Test Reagents
	WSS-M99P32-E2,3,4,5 Sect. 3.3.8.1	Resistance of Insulators to Various Test Reagents
	WSS-M99P32-F2, F3 Sect. 3.3.8.1	Resistance of Insulators to Various Test Reagents
	WSS-M99P32-F4, F5 Sect. 3.3.8.1	Resistance of Insulators to Various Test Reagents
	GMW16653, Sect 3.4.4	Fluid Resistance
STRENGTH Tension		
	ASTM B557	Tension Testing of Wrought and Cast Aluminum and Magnesium Alloy Products
	ASTM D412	Standard Test Methods for Vulcanized Rubber and Thermoplastic Elastomers—Tension
	ASTM D461 (1993)*, Sect. 12	Standard Test Methods for Felt – Breaking Load and Specific Strength
	ASTM D624	Standard Test Method for Tear Strength of Conventional Vulcanized Rubber and Thermoplastic Elastomers
	ASTM D828	Standard Test Method for Tensile Properties of Paper and Paperboard Using Constant-Rate-of-Elongation Apparatus
	ASTM E8	Tension Testing of Metallic Materials
	DIN 53530	Separation Test on Fabric Plies Bonded Together
	DIN EN 29073-3	Determination of Tensile Strength and Elongation for Nonwovens
	DIN ISO 34-1, Method A	Rubber, Vulcanized or Thermoplastic — Determination of Tear Strength
	ISO 37, Type 2	Rubber, Vulcanized or Thermoplastic — Determination of Tensile Stress-Strain Properties
	GMW3010	Determination of Tensile and Elongation Properties
	ISO 6892-1, Sect. 11, 20	Determination of Upper Yield Strength and Determination of Elongation After Fracture
	ISO 9073-18	Breaking Force and Elongation of Non-Woven Materials using Grab Tensile Test
	LP-463KB-02-01	Breaking Strength and Elongation Testing of Soft Trim Materials Grab Method
	LP-463TB-04-01	Determination of Tensile Strength for Tapes and Films
	WSS-M99P32-D1; D6* Sect. 3.9.1; 3.7.1	Breaking Strength
	WSS-M99P32-E1; E6 Sect. 3.8.1; 3.7.1	Breaking Strength
	WSS-M99P32-D2,3,4,5* Sect. 3.3.10; 3.4.13	Breaking Force

	TEST STANDARD	DESCRIPTION
STRENGTH Tension (cont)		
	WSS-M99P32-E2,3,4,5 Sect. 3.3.10,	Breaking Force
	WSS-M99P32-F2, F3 Sect. 3.3.10	Breaking Force
	WSS-M99P32-F4, F5 Sect. 3.3.10	Breaking Force
STRENGTH Tear		
	ISO 9073-4	Tear Resistance
	LP-463KB-03-01	Tear Strength of Soft Trim Materials
	DIN EN ISO 13937-2	Determination of Tear Force of Trouser-Shaped Test Specimens (Single tear method)
	ASTM D5587	Standard Test Method of Fabrics by Trapezoid Procedure
	ASTM D5733 (1999)*	Tearing Strength of Nonwoven Fabrics – Trapezoid Procedure
	GMW3326	Tearing Strength of Textile Materials by Trapezoid Method
	ASTM D2261	Tearing Strength of Fabrics by the Tongue (Single Rip) Procedure
	ASTM D5034	Breaking Strength and Elongation of Textile Fabrics – Grab Test
	ASTM D751 (Proc. A), Grab Method	Standard Test Methods for Coated Fabrics – Grab Method
	ASTM D461 (1993)*, Sect. 14	Standard Test Methods for Felt – Splitting Resistance
	GMW14695	Determining the Cohesive Strength of Felts and Similar Materials
	LP-463LB-10-01	Bond Strength of Trim Materials
	LTM-M100	Internal Shear Strength
THERMAL		
	ASTM C518	Steady-State Heat Flux Measurements and Thermal Transmission Properties by Means of the Heat Flow Meter
	GMW14659, Sect. 4.3.1	System Thermal Efficiency (Battery)
	LTM-T100	Flat Shield Simulator
WEIGHT		
	ASTM D202, Sect. 29-33 Apparent Density	Standard Test Methods for Sampling and Testing Untreated Paper Used for Electrical Insulation
	ASTM D3776	Standard Test Method for Mass Per Unit Area (Weight) of Fabric
	ASTM D461 (1993)*, Sect. 11	Standard Test Methods for Felt- Weight per Unit Area
	ASTM D646	Standard Test Method for Grammage of Paper and Paperboard (Mass per Unit Area)
	ASTM D751, Sect. 10	Mass per Unit area
	DIN EN 29073-1	Determination of Mass per Unit Area of Nonwovens

	TEST STANDARD	DESCRIPTION
WEIGHT (cont)		
	FLTM BN 106-01	Determination of Weight per Unit Area and Density of Trim Materials
	GMW3182	Determination of Mass per Area
	GMW16998	Dust-Out from Fiber Sound Absorber Pad
	FLTM BN 058-01	Fiber Loss Test for Insulation
THICKNESS		
	TAPPI T1016	Average Fiber Diameter of Fiberglass Mats
	ISO 5084	Determination of Thickness of Textiles and Textile Products
	ASTM E252	Standard Test Method for Thickness of Foil, Thin Sheet, and Film by Mass Measurement
	ISO 2589	Determination of Thickness
	ASTM D1777	Standard Test Method for Thickness of Textile Materials
	ASTM D461 (1993)*, Sect. 10	Standard Test Methods for Felt – Thickness of Conditioned Specimens
	ASTM D5729	Standard Method for Thickness of Nonwoven Fabrics
	ASTM D5736-95(2001)*	Standard Test Method for Thickness of Highloft Nonwoven Fabrics
	ASTM D645	Standard Test Method for Thickness of Paper and Paperboard
	SAE J882	Test Method for Measuring Thickness of Automotive Textiles and Plastics

** 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.*

Accredited Laboratory

A2LA has accredited

LYDALL THERMAL/ACOUSTICAL GROUP, MATERIALS TESTING LABORATORIES

Hamptonville, NC

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 laboratory also meets the requirements of any additional program requirements in the mechanical field. 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 16th day of September 2022.

Mr. Trace McInturff, Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 1959.01
Valid to June 30, 2024

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