



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

ELEMENT LOS ANGELES  
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MECHANICAL

Valid To: July 31, 2020

Certificate Number: 0096.01

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory at the location above, as well as the one satellite laboratory listed below<sup>1</sup> to perform the following tests on adhesives, composites and laminates, printed boards and electrical insulating materials, elastomers, plastics and engineering thermoplastics, graphite or boron reinforced thermoplastics, metal matrix composites, graphite/epoxy, graphite/bismaleimide, polyimide/glass, epoxy/glass, toughened epoxy systems and graphite aramid or boron reinforced epoxies, and similar materials.

<b><u>Test Method:</u></b>	<b><u>Test Title:</u></b>
ASTM B117	Standard Practice for Operating Salt Spray (Fog) Apparatus
ASTM B487	Test Method for Metal and Oxide Coating Thickness by Microscopical Examination of a Cross Section
ASTM C20	Standard Test Methods for Apparent Porosity, Water Absorption, Apparent Specific Gravity, and Bulk Density of Burned Refractory Brick and Shapes by Boiling Water
ASTM C271	Test Method for Density of Sandwich Core Materials
ASTM C273	Test Method for Shear Properties in Flatwise Plane of Flat Sandwich Constructions or Sandwich Cores
ASTM C297	Test Method for Tensile Strength of Flat Sandwich Constructions in Flatwise Plane
ASTM C363	Test Method for Node Tensile Strength of Honeycomb Core Materials
ASTM C364	Test Method for Edgewise Compressive Strength of Flat Sandwich Constructions
ASTM C365	Test Methods for Flatwise Compressive Strength of Sandwich Cores
ASTM C373	Determination of Water Absorption and Associated Properties by Vacuum Method for Pressed Ceramic Tiles and Glass Tiles and Boil Method for Extruded Ceramic Tiles and Non-tile Fired Ceramic Whiteware Products
ASTM C393	Test Method for Flexural Properties of Flat Sandwich Constructions
ASTM C394	Standard Test Method for Shear Fatigue of Sandwich Core Materials
ASTM C1166	Test Method for Flame Propagation of Dense and Cellular Elastomeric Gaskets and Accessories
ASTM C1275	Monotonic Tensile Behavior of Continuous Fiber-Reinforced Advanced Ceramics with Solid Rectangular Cross-Section Test Specimens at Ambient Temperature
ASTM C1359	Standard Test Method for Monotonic Tensile Strength Testing of Continuous Fiber-Reinforced Advanced Ceramics with Solid Rectangular Cross Section Test Specimens at Elevated Temperatures
ASTM D149	Test Method for Dielectric Breakdown Voltage and Dielectric Strength of Solid Electrical Insulating Materials at Commercial Power Frequencies
ASTM D150	Test Methods for A-C Loss Characteristics and Permittivity (Dielectric Constant) of Solid Electrical Insulating Materials
ASTM D229	Rigid Sheet and Plate Materials Used for Electrical Insulation
ASTM D256	Test Methods for Determining the Izod Pendulum Impact Resistance of Plastics

**Test Method:****Test Title:**

ASTM D257	Test Methods for D-C Resistance or Conductance of Insulating Materials
ASTM D297	Test Method for Rubber Products – Chemical Analysis (Section 16.3)
ASTM D395	Rubber Property—Compression Set
ASTM D412	Test Methods for Vulcanized Rubber and Thermoplastic Rubbers and Thermoplastic Elastomers- Tension
ASTM D471	Test Method for Rubber Property-Effect of Liquids (Section 15 only)
ASTM D495	Test Method for High-Voltage, Low-Current, Dry Arc-Resistance of Solid Electrical Insulation
ASTM D568	Standard Test Method for Rate of Burning and/or Extent and Time of Burning of Flexible Plastics in a Vertical Position
ASTM D570	Test Method for Water Absorption of Plastics
ASTM D575	Test Methods for Rubber Properties in Compression
ASTM D618	Conditioning of Plastics for Testing
ASTM D621-64(88) <sup>2</sup>	Test Methods for Deformation of Plastics Under Load (Withdrawn 1994)
ASTM D624	Test Method for Tear Strength of Conventional Vulcanized Rubber and Thermoplastic Elastomers (Die B & C)
ASTM D635	Test Method for Rate of Burning and/or Extent and Time Burning of Self-Supporting Plastics in a Horizontal Position
ASTM D638	Test Method for Tensile Properties of Plastics
ASTM D646	Mass Per Unit Area of Paper and Paperboard of Aramid Papers (Basis Weight)
ASTM D648	Standard Test Method for Deflection Temperature of Plastics Under Flexural Load in the Edgewise Position
ASTM D695	Test Method for Compressive Properties of Rigid Plastics
ASTM D732	Test Method for Shear Strength of Plastics by Punch Tool
ASTM D747	Apparent Bending Modulus of Plastics by Means of a Cantilever Beam
ASTM D785	Rockwell Hardness of Plastics and Electrical Insulating Materials
ASTM D790	Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials
ASTM D792	Test Methods for Density and Specific Gravity (Relative Density) of Plastics by Displacement (Method A)
ASTM D877	Test Method for Dielectric Breakdown Voltage of Insulating Liquids Using Disk Electrodes
ASTM D882	Test Methods for Tensile Properties of Thin Plastic Sheeting
ASTM D897	Standard Test Method for Tensile Properties of Adhesive Bonds
ASTM D903	Test Method for Peel or Stripping Strength of Adhesive Bonds
ASTM D924	Test Method for Dissipation Factor (or Power Factor) and Relative Permittivity (Dielectric Constant) or Electrical Insulating Liquids
ASTM D952	Test Method for Bond or Cohesive Strength of Sheet Plastics and Electrical Insulating Materials
ASTM D953	Test Method for Bearing Strength of Plastics
ASTM D991	Test Method for Rubber Property-Volume Resistivity of Electrically Conductive and Antistatic Products
ASTM D1002	Test Method for Apparent Shear Strength of Single-Lap-Joint Adhesively Bonded Metal Specimens by Tension Loading (Metal-to-Metal)
ASTM D1004	Test Method for Initial Tear Resistance of Plastic Film and Sheeting
ASTM D1043	Test Method for Stiffness Properties of Plastics as a Function of Temperature by Means of a Torsion Test
ASTM D1084	Standard Test Methods for Viscosity of Adhesives (Method D)
ASTM D1169	Test Method for Specific Resistance (Resistivity) of Electrical Insulating Liquids
ASTM D1200	Standard Test Method for Viscosity by Ford Viscosity Cup
ASTM D1238	Test Method for Flow Rates of Thermoplastics by Extrusion Plastometer (Method A)

<u>Test Method:</u>	<u>Test Title:</u>
ASTM D1298	Test Method for Density, Relative Density, or API Gravity of Crude Petroleum and Liquid Petroleum Products by Hydrometer Method
ASTM D1329	Test Method for Evaluating Rubber Property-Retraction at Lower Temperatures (TR Test)
ASTM D1364	Standard Test Method for Water in Volatile Solvents (Karl Fischer Reagent Titration Method)
ASTM D1414	Standard Test Methods for Rubber O-Rings
ASTM D1621	Test Method for Compressive Properties of Rigid Cellular Plastics
ASTM D1622	Test Method for Apparent Density of Rigid Cellular Plastics
ASTM D1623	Test Method for Tensile and Tensile Adhesion Properties of Rigid Cellular Plastics
ASTM D1708	Test Method for Tensile Properties of Plastics by Use of Microtensile Specimens
ASTM D1781	Test Method for Climbing Drum Peel for Adhesives
ASTM D1824	Test Method for Apparent Viscosity of Plastisols and Organosols at Low Shear Rates
ASTM D1876	Test Method for Peel Resistance of Adhesives (T-Peel Test)
ASTM D1938	Standard Test Method for Tear-Propagation Resistance (Trouser Tear) of Plastic Film and Thin Sheeting by Single-Tear Method
ASTM D2095	Test Method for Tensile Strength of Adhesives by Means of Bar and Rod Specimens
ASTM D2126	Standard Test Method for Response of Rigid Cellular Plastics to Thermal and Humid Aging
ASTM D2240	Test Method for Rubber Property-Durometer Hardness (Shore A & D)
ASTM D2295	Test Method for Strength Properties of Adhesives in Shear by Tension Loading at Elevated Temperatures (Metal-to-Metal)
ASTM D2344	Test Method for Apparent Interlaminar Shear Strength of Parallel Fiber Composites by Short-Beam Method
ASTM D2520	Test Method for Complex Permittivity (Dielectric Constant) of Solid Electrical Insulating Materials at Microwave Frequencies and Temperatures to 1650 °C
ASTM D2557	Test Method for Tensile-Shear Strength of Adhesives in the Subzero Temperature Range from (-267.8 to -55) °C or (-450 to -67) °F
ASTM D2583	Test Method for Indentation Hardness of Rigid Plastics by Means of a Barcol Impressor
ASTM D2584	Test Method for Ignition Loss of Cured Reinforced Resins
ASTM D2734	Void Content of Reinforced Plastics
ASTM D2857	Standard Practice for Dilute Solution Viscosity of Polymers
ASTM D2919	Test Method for Determining Durability of Adhesive Joints Stressed in Shear by Tension Loading
ASTM D3039	Test Method for Tensile Properties of Polymer Matrix Composite Materials
ASTM D3163	Test Method for Determining Strength of Adhesively Bonded Rigid Plastic Lap-Shear Joints in Shear by Tension Loading
ASTM D3164	Test Method for Strength Properties of Adhesively Bonded Plastic Lap-Shear Sandwich Joints in Shear by Tension Loading
ASTM D3165	Test Method for Strength Properties of Adhesives in Shear by Tension Loading of Single-Lap-Joint Laminated Assemblies
ASTM D3166	Standard Test Method for Fatigue Properties of Adhesives in Shear by Tension Loading (Metal/Metal)
ASTM D3167	Test Method for Floating Roller Peel Resistance of Adhesives
ASTM D3171	Test Method for Fiber Content of Resin-Matrix Composites by Matrix Digestion (Method A, B, and G)
ASTM D3330	Test Method for Peel Adhesion of Pressure-Sensitive Tape
ASTM D3359	Test Methods for Measuring Adhesion by Tape Test
ASTM D3386-00 <sup>2</sup>	Test Method of Coefficient of Linear Thermal Expansion of Electrical Insulating Materials (Withdrawn 2005)

<u>Test Method:</u>	<u>Test Title:</u>
ASTM D3410/3410M	Test Method for Compressive Properties of Polymer Matrix Composite Materials with Unsupported Gage Section by Shear Loading
ASTM D3417-99 <sup>2</sup>	Test Method for Enthalpies of Fusion and Crystallization of Polymers by Differential Scanning Calorimetry (DSC) (Withdrawn 2004)
ASTM D3418	Test Method for Transition Temperatures of Polymers by Thermal Analysis
ASTM D3433	Standard Test Method for Fracture Strength in Cleavage of Adhesives in Bonded Metal Joints
ASTM D3479	Test Methods for Tension-Tension Fatigue of Oriented Fiber, Resin Matrix Composites
ASTM D3518	Practice for In-Plane Shear Stress-Strain Response of Unidirectional Polymer Matrix Composite Materials by Tensile Test of ±45 Laminate
ASTM D3528	Test Method for Strength Properties of Double Lap Shear Adhesive Joints by Tension Loading
ASTM D3529	Test Method for Resin Solids Content of Epoxy-Matrix Prepreg by Matrix Dissolution
ASTM D3530	Test Method for Volatiles Content of Epoxy-Matrix Prepreg
ASTM D3531	Test Method for Resin Flow of Carbon Fiber-Epoxy Prepreg
ASTM D3532	Test Method for Gel Time of Carbon Fiber-Epoxy Prepreg
ASTM D3552	Standard Test Method for Tensile Properties of Fiber Reinforced metal Matrix Composites
ASTM D3759	Test Method for Breaking Strength and Elongation of Pressure Sensitive Tape
ASTM D3776	Standard Test Method for Mass Per Unit Area (Weight) of Fabric
ASTM D3846	Test Method for In-Plane Shear Strength of Reinforced Plastics
ASTM D3850	Test Method for Rapid Thermal Degradation of Solid Electrical Insulating Materials by Thermogravimetric Method
ASTM D3895	Standard Test Method for Oxidative-Induction Time of Polyolefins by Differential Scanning Calorimetry
ASTM D3914	Standard Test Method for In-Plane Shear Strength of Pultruded Glass-Reinforced Plastic Rod
ASTM D3916	Standard Test Method for Tensile Properties of Pultruded Glass-Fiber-Reinforced Plastic Rod
ASTM D4065	Standard Practice for Plastics: Dynamic Mechanical Properties: Determination and Report of Procedures
ASTM D4255	In-Plane Shear Properties of Polymer Matrix Composite Materials by the Rail Shear Method
ASTM D4475	Test Method for Apparent Horizontal Shear Strength of Pultruded Reinforced Plastic Rods by the Short-Beam Method
ASTM D4496	Test Method for D-C Resistance or Conductance of Moderately Conductive Materials
ASTM D4591	Test Method for Determining Temperatures and Heats of Transitions of Fluoropolymers by Differential Scanning Calorimetry
ASTM D4804	Standard Test Method for Determining the Flammability Characteristics of Nonrigid Solid Plastics
ASTM D4812	Standard Test Method for Unnotched Cantilever Beam Impact Resistance of Plastics
ASTM D5023	Test Method for Plastics: Dynamic Mechanical Properties: In Flexure (Three-Point Bending)
ASTM D5024	Test Method for Plastics: Dynamic Mechanical Properties: In Compression
ASTM D5026	Test Method for Plastics: Dynamic Mechanical Properties: In Tension
ASTM D5035	Breaking Force and Elongation of Textile Fabrics (Strip Method)
ASTM D5083	Tensile Properties of Reinforced Thermosetting Plastics Using Straight Sided Specimens
ASTM D5229	Standard Test Method for Moisture Absorption Properties and Equilibrium Conditioning of Polymer Matrix Composite Materials
ASTM D5379	Test Method for Shear Properties of Composite Materials by the V- Notched Beam Method

**Test Method:****Test Title:**

ASTM D5420	Test Method for Impact Resistance of Flat, Rigid Plastic Specimen by Means of a Striker Impacted by a Falling Weight (Gardner Impact)
ASTM D5467	Test Method for Compressive Properties of Unidirectional Polymer Matrix Composites Using a Sandwich Beam
ASTM D5528	Mode I Interlaminar Fracture Toughness of Unidirectional Fiber Reinforced Polymer Matrix Composite
ASTM D5628	Standard Test Method for Impact Resistance of Flat, Rigid Plastic Specimens by Means of a Falling Dart (Tup or Falling Mass)
ASTM D5656	Test Method for Thick Adherend Metal Lap-Shear Joints for Determination of the Stress-Strain Behavior of Adhesives in Shear by Tension Loading
ASTM D5766	Open Hole Tensile Strength of Polymer Matrix Composite Laminates
ASTM D5868	Test Method for Lap Shear Adhesion for Fiber Reinforced Plastic (FRP) Bonding
ASTM D5961	Test Method for Bearing Response of Polymer Matrix Composite Laminates
ASTM D6110	Test Method for Determining the Charpy Impact Resistance of Notched Specimens of Plastics
ASTM D6264	Test Method for Measuring the Damage Resistance of a Fiber-Reinforced Polymer-Matrix Composite to a Concentrated Quasi-Static Indentation Force
ASTM D6267	Standard Test Method for Apparent Viscosity of Hydrocarbon Resins at Elevated Temperatures
ASTM D6272	Test Method for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials by Four-Point Bending
ASTM D6413	Flame Resistance of Textiles (Vertical Test)
ASTM D6415	Test Method for Measuring the Curved Beam Strength of a Fiber Reinforced Polymer Composite
ASTM D6484	Test Method for Open-Hole Compressive Strength of Polymer Matrix Composite Laminates
ASTM D6641	Test Method for Determining the Compressive Properties of Polymer Matrix Composite Laminate Using a Combined Loading Compression (CLC) Test Fixture
ASTM D6671	Mixed Mode I-Mode II Interlaminar Fracture Toughness of Unidirectional Fiber Reinforced Polymer Matrix Composites
ASTM D6742	Filled Hole Tension and Compression Testing of Polymer Matrix Composites
ASTM D6862	90 Degree Peel Resistance of Adhesives
ASTM D6869	Standard Test Method for Coulometric and Volumetric Determination of Moisture in Plastics Using the Karl Fischer Reaction (the Reaction of Iodine with Water)
ASTM D7028	Test Method for Glass Transition Temperature (DMA Tg) of Polymer Matrix Composites by Dynamic Mechanical Analysis (DMA)
ASTM D7078	Test Method for Shear Properties of Composite Materials by V-Notched Rail Shear Method
ASTM D7136	Test Method for Measuring the Damage Resistance of a Fiber-Reinforced Polymer Matrix Composite to a Drop-Weight Impact Event
ASTM D7137	Test Method for Compressive Residual Strength Properties of Damaged Polymer Matrix Composite Plates
ASTM D7248	Standard Test Method for Bearing/Bypass Interaction Response of Polymer Matrix Composite Laminates Using 2-Fastener Specimens
ASTM D7249	Test Method for Facing Properties of Sandwich Constructions by Long Beam Flexure
ASTM D7250	Practice for Determining Sandwich Beam Flexural and Shear Stiffness
ASTM D7264	Test Method for Flexural Properties of Polymer Matrix Composite Materials
ASTM D7291	Test Method for Through-Thickness "Flatwise" Tensile Strength and Elastic Modulus of a Fiber-Reinforced Polymer Matrix Composite Material

<b><u>Test Method:</u></b>	<b><u>Test Title:</u></b>
ASTM D7332	Test Method for Measuring the Fastener Pull-Through Resistance of a Fiber-Reinforced Polymer Matrix Composite
ASTM D7426	Test Method for Assignment of the DSC Procedure for Determining Tg of a Polymer or an Elastomeric Compound
ASTM D7565	Determining Tensile Properties of Fiber Reinforced Polymer Matrix Composites Used for Strengthening of Civil Structures
ASTM D7615/ASTM D7615M	Standard Practice for Open-Hole Fatigue Response of Polymer Matrix Composite Laminates
ASTM D7616	Apparent Overlap Splice Shear Strength Properties of Wet Lay-Up Fiber-Reinforced Polymer Matrix Composites Used for Strengthening Civil Structures
ASTM D7766	Damage Resistance Testing of Sandwich Constructions
ASTM D7905	Standard Test Method for Determination of the Mode II Interlaminar Fracture Toughness of Unidirectional Fiber-Reinforced Polymer Matrix Composites
ASTM D7956	Standard Practice for Compressive Testing of Thin Damaged Laminates Using a Sandwich Long Beam Flexure Specimen
ASTM E3	Practice for Preparation of Metallographic Specimens
ASTM E8	Standard Test Methods for Tension Testing of Metallic Materials
ASTM E18	Rockwell Hardness of Metallic Materials
ASTM E662	Test Method for Specific Optical Density of Smoke Generated by Solid Materials
ASTM E831	Test method for Linear Thermal Expansion of Solid Materials by Thermomechanical Analysis
ASTM E990	Standard Specifications for Core-Splice Adhesive for Honeycomb Sandwich Structural Panels (Except Water Migration)
ASTM E1131	Test Method for Compositional Analysis by Thermogravimetry
ASTM E1252	Standard Practice for General Techniques for Obtaining Infrared Spectra for Qualitative Analysis
ASTM E1269	Determining Specific Heat Capacity by DSC
ASTM E1356	Test Method for Glass Transition Temperatures by Differential Scanning Calorimetry or Differential Thermal Analysis (DSC Only)
ASTM E1545	Test Method for Assignment of the Glass Transition Temperature by Thermomechanical Analysis
ASTM E1640	Test Method for Assignment of the Glass Transition Temperature by DMA
ASTM E1952	Standard Test Method for Thermal Conductivity and Thermal Diffusivity by Modulated Temperature Differential Scanning Calorimetry
ASTM E2004	Test Method for Facing Cleavage of Sandwich Panels
ASTM E2160	Standard Test Method for Heat Reaction of Thermally Reactive Materials by Differential Scanning Calorimetry
ASTM F814-84b <sup>2</sup>	Test Method for Specific Optical Density of Smoke Generated by Solid Materials for Aerospace Applications (Withdrawn 1995)
ASTM G154	Practice for Operating Fluorescent Light Apparatus for UV Exposure of Nonmetallic Materials
BS EN 2564	Aerospace Series-Carbon Fibre Laminates – Determination of Fibre, Resin, and Void Contents
BS EN 6032	Aerospace Series – Fibre Reinforced Plastics – Test Method- Determination of the Glass Transition Temperatures
BS EN 6033	Aerospace Series – Carbon Fibre Reinforced Plastics – Test Method – Determination of Interlaminar Fracture Toughness Energy – Model I - GIC
BS EN 6034	Aerospace Series - Carbon Fibre Reinforced Plastics – Test Method – Determination of Interlaminar Fracture Toughness Energy – Model II - GIIC
BS EN 6040	Aerospace Series – Non-Metallic Materials – Test Method – Analysis of Thermoset Systems by High Performance Liquid Chromatography (HPLC) – Qualitative Only

**Test Method:**

**Test Title:**

ISO 178	Plastics – Determination of Flexural Properties
ISO 179	Plastics – Determination of Charpy Impact Properties – Part 1: Non-instrumental Impact Test
ISO 527	Plastics – Determination of Tensile Properties
ISO 760	Determination of Water – Karl Fischer Method
ISO 844	Rigid Cellular Plastics – Determination of Compression Properties
ISO 1817	Rubber, Vulcanized or Thermoplastic – Determination of the Effect of Liquids
ISO 1926	Rigid Cellular Plastics – Determination of Tensile Properties
ISO 14125	Fibre-Reinforced Plastic Composites – Determination of the Flexural Properties
ISO 14126	Fibre-Reinforced Plastic Composites – Determination of Compressive Properties in the In-Plane Direction
ISO 14129	Fibre-Reinforced Plastic Composites – Determination of the In-Plane Shear Strain Response, including the In-Plane Shear Modulus and Strength by the $\pm 45$ Tension Test Method

**DOT:**

DOT FMVSS 302	Department of Transportation Motor Vehicle Safety Standard Flammability of Interior Materials
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**FAA:**

FAR 25.853	Airworthiness Standards: Transport Category Airplanes, Fire Protection, Compartment Interiors, Appendix F, Part I, IV, and V
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**Boeing:**

BSS 7230	Determination of Flammability Properties of Aircraft Materials
BSS 7238	Test Method for Smoke Generation by Materials on Combustion
BSS 7239	Test Method for Toxic Gas Generation by Materials on Combustion
BSS 7322	Boeing Specification Support Standard, Ohio State University Calorimeter Heat Release, Determination of

**Airbus:**

AITM 2.0002	Resistance of Materials When Tested According to the 12 s or 60 s Vertical Bunsen Burner Test
AITM 2.0003	Flammability of Non-metallic Materials, - Small Burner Test, Horizontal
AITM 2.0004	Flammability of Non-metallic Materials, - Small Burner Test, 45 degrees
AITM 2.0005	Flammability of Non-metallic Materials, - Small Burner Test, 60 degrees
AITM 2.0006	Determination of Heat Release and Heat Release Rate of Aircraft Materials
AITM 2.0007	Determination of Specific Optical Smoke Density of Component Parts or Sub-Assemblies of Aircraft Interior
AITM 2.0008	Determination of Specific Optical Smoke Density of Wire/Cable Insulation
AITM 2.0038	Flammability of Heat Shrinkable Tubing's, - Small Burner Test, 60 degrees
AITM 3.0005	Determination of Specific Gas Components of Smoke Generated by Component Parts or Sub-Assemblies of Aircraft Interior

**Test Method:**                      **Test Title:**

**Military Standards:**

MIL-STD-810	Environmental Engineering Considerations and Laboratory Tests:
Method 501	High Temperature
Method 502	Low Temperature
Method 507	Humidity
MIL-STD-202	Test Methods for Electronic and Electrical Component Parts:
Method 103	Humidity (Steady State)
Method 104	Immersion (Method A)
Method 108	Life (at Elevated Ambient Temperature)
Method 301	Dielectric Withstanding Voltage
Method 302	Insulation Resistance
Method 303	DC Resistance

**SACMA (Suppliers of Advanced Composite Materials Association):**

SRM 1-94	Compressive Properties of Oriented Fiber-Resin Composites
SRM 2-94	Compression After Impact Properties of Oriented Fiber-Resin Composites
SRM 3-94	Open-Hole Compression Properties of Oriented Fiber-Resin Composites
SRM 4-94	Tensile Properties of Oriented Fiber-Resin Composites
SRM 2R-94	Compression After Impact Properties of Oriented Fiber-Resin Composites
SRM 5-94	Open-Hole Tensile Properties of Fiber-Resin Composites
SRM 6-94	Compressive Properties of Oriented Cross-Plied Fiber-Resin Composites
SRM 7-94	In-Plane Shear Stress-Strain Properties of Oriented Fiber-Resin Composites
SRM 8-94	Short Beam Shear Strength of Oriented Fiber-Resin Composites
SRM 9-94	Tensile Properties of Oriented Cross-Plied Fiber-Resin Composite
SRM 10R-94	Fiber Volume, Percent Resin Volume and Calculated Average Cured Ply Thickness of Plied Laminates
SRM 11R-94	Environmental Conditioning of Composite Test Laminates
SRM 18R-94	Glass Transition Temperature (T <sub>g</sub> ) Determination By DMA
SRM 21R-94	Fluid Resistance Evaluating of Composite Materials
SRM 22R-94	Determining the Resin Flow of Preimpregnated "B" Staged Material
SRM 23R-94	Determination of Resin Content and Fiber Areal Weight of Thermoset Prepreg with Destructive Techniques
SRM 25R-94	Onset Temperature and Peak Temperature for Composite Resin Systems Using Differential Scanning Calorimetry (DSC)





**Test Method:**                      **Test Title:**

Sikorsky

SS9152/PP101                      Determination of Glass Transition Temperature by DMA, Single Cantilever Method

SAE (Society of Automotive Engineers)

SAE J2253                      Test Procedures for Automotive Structural Composite Materials (Formerly ACCM-T-02)

Section 8.2	Specific Gravity
Section 8.3 – 8.5	Resin / Filler / Void Content
Section 9.2	DMA
Section 10	Tensile Testing
Section 11	Compressive Testing
Section 12	Shear Testing

*The laboratory is only accredited for the test methods listed above. The accredited test methods are used in determining compliance with the material specifications listed below. The inclusion of these material specifications on this Scope does not confer laboratory accreditation to the material specifications nor does it confer accreditation for the method(s) embedded within the specifications.*

**Specification / Standard:**                      **Specification / Standard Title:**

ASTM B987	Standard Specification for Carbon Fiber Composite Core (CFCC/TS) for use in Overhead Electrical Conductors
ASTM D876	Electrical Insulation
ASTM D1414	Test Methods for Rubber O-Rings
ASTM D1675	Standard Test Methods for Polytetrafluethylene Tubing
ASTM D4745	Standard Specification for Filled Compounds of Polytetrafluoroethylene (PTFE) Molding and Extrusion Materials
ASTM D4762	Standard Guide for Testing Polymer Matrix Composite Materials
ABD 0031	Fireworthiness Requirements Pressurized Section of Fuselage
BOEING D6-51377	Airplane Fire Worthiness Design Criteria-Pressurized Compartments
IPC-CC-830	Qualification and Performance of Electrical Insulating Compound for Printed Board Assemblies
MIL-I-46058	General Specification for Insulating Compound, Electrical (For Coating Printed Circuit Assemblies) (Except Fungus)
MMM-A-132	Federal Specification for Adhesives, Heat Resistant, Airframe Structural, Metal-to-Metal
NASA 1092	Standard Tests for Toughened Resin Composites
NASA 1142	NASA / Aircraft Industry Standard Specification for Graphite Fiber-Toughened Thermoset Composite Materials



<sup>1</sup>This accreditation covers testing performed at the main laboratory listed above, as well as the satellite laboratory listed below.

<sup>2</sup>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.

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<b><u>Test Method:</u></b>	<b><u>Test Title:</u></b>
ASTM C1275	Standard Test Method for Monotonic Tensile Behavior of Continuous Fiber-Reinforced Advanced Ceramics with Solid Rectangular Cross-Section Test Specimens at Ambient Temperature
ASTM C1337	Standard Test Method for Creep and Creep Rupture of Continuous Fiber-Reinforced Advanced Ceramics Under Tensile Loading at Elevated Temperatures
ASTM C1359	Standard Test Method for Monotonic Tensile Strength Testing of Continuous Fiber-Reinforced Advanced Ceramics with Solid Rectangular Cross Section Test Specimens at Elevated Temperatures
ASTM C1360	Standard Practice for Constant-Amplitude, Axial, Tension-Tension Cyclic Fatigue of Continuous Fiber-Reinforced Advanced Ceramics at Ambient Temperatures
ASTM C1361	Standard Practice for Constant-Amplitude, Axial, Tension-Tension Cyclic Fatigue of Advanced Ceramics at Ambient Temperature
ASTM D3039	Test Method for Tensile Properties of Polymer Matrix Composite Materials



# Accredited Laboratory

A2LA has accredited

## ELEMENT LOS ANGELES

*Duarte, CA*

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 30<sup>th</sup> day of November 2018.

A blue ink signature of the Vice President of Accreditation Services.

Vice President, Accreditation Services  
For the Accreditation Council  
Certificate Number 0096.01  
Valid to July 31, 2020  
Revised July 3, 2019

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