SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

ADVANCED PLASTIC AND MATERIAL TESTING, INC.
42 Dutch Mill Road - Warren Road Business Park
Ithaca, NY 14850
Joseph Gagnon Phone: (607) 257 - 8378
Fax: (607) 257 - 1586

MECHANICAL

Valid To: November 30, 2028 Certificate Number: 0326.01

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following tests on ABS, Acetal, acrylic, acrylonitrile butadiene styrene, adhesives, automotive products, cable, circuit boards, coatings, composites, contaminants, fasteners, films, fluid, foam, fuel, gaskets, HDPE, jewelry, labels, ladders, LDPE, lubricants, metal, metal alloys, mirrors, Nylon, oil, packaging, PAEK, paint, PCTFE, PEEK, PET, PETE, petroleum products, pipe, plastic, platings, PMMA, polyamide, polycarbonate, polyethylene, polymers, polyoxymethylene, polypropylene, polystyrene, polyvinyl chloride, POM, powder metal, PTFE, pultrusions, PVC, rubber, sealants, siding, solutions, tape, and wire:

Test Method:	**Test Description:**
AMS 3650	Dimensional Stability of PCTFE (*except Zero Strength Time*)
AMS 3678	Dimensional Stability of PTFE
ASM Handbook, Vol. 11	Failure Analysis and Prevention (Using methods listed on this Scope of Accreditation): Root Cause Analysis, Failure Mechanism, Fractography, Fracture Examination, Processing Defects, Degradation, Contaminant Identification, Chemical Resistance, Corrosion Analysis, Microstructure, Microstructural Analysis, Material Analysis
ASME B46.1	Surface Texture: Surface Roughness, Waviness and Lay, Arithmetic Average
ASTM A247	Microstructure of Graphite in Iron Castings: Ductile Iron, Cast Iron, Nodularity
ASTM A370	Mechanical Testing of Steel Products (*except Impact*): Tension, Bend, Brinell Hardness, Rockwell Hardness
ASTM B117	Salt Spray (Fog) Apparatus Operation: Corrosion Resistance, Salt Fog Test
ASTM B244	Coating Thickness (Dry Film Thickness) by Eddy Current
ASTM B298	Continuity of Coating (Continuity Test Only)
ASTM B487	Coating Thickness by Microscopical Examination of a Cross Section: Plating Thickness, Coating Thickness, Paint Thickness
ASTM B499	Coating Thickness by Magnetic Method
ASTM B557	Tensile Properties of Aluminum and Magnesium Alloys
ASTM B568	Coating Thickness by X-Ray Fluorescence (XRF): Plating Thickness
ASTM B571	Qualitative Adhesion Testing of Metallic Coatings (*except Draw Test*): Bend, Burnishing, Chisel-Knife, File, Grind-Saw, Heat-Quench, Impact, Peel, Push, Scribe-Grid
ASTM B578	Microhardness of Coatings: Knoop, Vickers
ASTM B678	Solderability of Coated Products
ASTM B748	Coating Thickness by Scanning Electron Microscope (SEM) in Cross Section
ASTM C1147	Tensile Weld Strength (*except Preparation of Welds*)
ASTM D115	Solvent Containing Varnishes (Dielectric Strength Only)

Test Method:	Test Description:
ASTM D149	Dielectric Breakdown Voltage and Dielectric Strength (100 kV Maximum)
ASTM D150	Dielectric Constant (Permittivity) and Dissipation Factor
ASTM D256	Izod Pendulum Impact Resistance: Impact Resistance, Izod Impact, Reverse Notch Impact
ASTM D257	DC Resistance or Conductance of Insulating Materials: DC Resistance, Insulation Resistance, Surface Resistance, Surface Resistivity, Volume Resistance, Volume Resistivity
ASTM D374,	Thickness of Electrical Insulation (Methods A & C)
ASTM D380	Rubber Hose (Pressure Tests Only): Burst, Hydrostatic
ASTM D395, Method B	Compression Set
ASTM D412	Tension Test Methods: Elongation, Tensile Properties, Tensile Set, Tensile Strength, Tensile Stress, Yield Point
ASTM D471	Effect of Liquids: Fluid Immersion, Fluid Resistance, Volume Change
ASTM D523	Specular Gloss (60º)
ASTM D542	Index of Refraction: Refractive Index, Refractometer
ASTM D543	Chemical Resistance of Plastics: Environmental Stress Cracking (ESCR)
ASTM D573	Air Oven Deterioration: Heat Aging, Heat Resistance, Oxidative Aging, Accelerated Aging, Thermal Aging, Oven Aging
ASTM D610	Evaluating Degree of Rusting on Painted Steel Surfaces
ASTM D618	Conditioning Plastics
ASTM D621 (1994)	Deformation Under Load
ASTM D624	Tear Strength: Tear Resistance
ASTM D635	Flammability of Plastics in a Horizontal Position
ASTM D638	Tensile Properties: Modulus of Elasticity, Percent Elongation, Tensile Strength, Poisson's Ratio, Yield Strength, Young's Modulus
ASTM D648, Method B	Heat Deflection Temperature (HDT, DTUL)
ASTM D695	Compressive Properties: Compressive Strength, Compressive Modulus
ASTM D714	Evaluating Degree of Blistering of Paints
ASTM D732	Shear Strength by Punch Tool
ASTM D785	Rockwell Hardness of Plastics (Scales: R, L, M, E, K)
ASTM D790	Flexural Properties: Flexural Strength, Flexural Modulus, Secant Modulus
ASTM D865	Deterioration by Heating in Air: Heat Aging, Heat Resistance
ASTM D882	Tensile Properties of Thin Sheet: Modulus of Elasticity, Tensile Strength, Toughness, Yield Stress, Breaking Factor, Secant Modulus
ASTM D897	Tensile Properties of Adhesive Bonds
ASTM D903	Peel Strength: 180º Peel, Adhesive Bonding, Stripping Strength
ASTM D953	Bearing Strength
ASTM D1002	Shear Strength by Lap Joint: Lap Shear Strength
ASTM D1003, Procedure B	Luminous Transmittance and Haze
ASTM D1004	Tear Resistance (Graves Tear) of Film
ASTM D1044	Surface Abrasion of Transparent Plastics
ASTM D1056	Cellular Materials – Foam Density & Compression Deflection Only
ASTM D1414	Rubber O-Ring Testing (*except Low Temperature Test, Mold Shrinkage, Corrosion*): Tension Testing, Tension Set, Compression Set, Relative Density, Immersion, Heat Aging, Hardness
ASTM D1415	International Hardness (IRHD): Rubber Microhardness
ASTM D1525	Vicat Softening Temperature (VST): Vicat Softening Point
ASTM D1599	Pressure Testing of Pipe, Tubing, and Fittings: Hydrostatic Testing

Test Method:	Test Description:
ASTM D1621	Compressive Properties of Cellular Plastics
ASTM D1622/D1622M	Density of Cellular Plastics: Foam Density
ASTM D1654	Evaluation of Painted or Coated Specimens After Corrosive Environments: Corrosion Creepback, Blistering, Corrosion, Creepage
ASTM D1675	PTFE Tubing (Except Wall Thickness and Penetration)
ASTM D1708	Tensile Properties by Microtensile Specimens
ASTM D1709	Impact Resistance of Film: Dart Drop Impact
ASTM D1710	Dimensional Stability of PTFE
ASTM D1781	Climbing Drum Peel: Peel Strength
ASTM D1876	Peel Resistance: T-Peel Test
ASTM D1894	Coefficient of Friction: Kinetic Friction, Static Friction
ASTM D1922	Propagation Tear Resistance of Film: Elmendorf Tear Resistance
ASTM D2197	Scrape Adhesion
ASTM D2240	Durometer Hardness (Scales A, D and M): Shore Hardness, Indentation Hardness, Micro-Hardness
ASTM D2244	Color Difference by Instrumental Analysis: CIELAB
ASTM D2344/D2344M	Short Beam Shear Strength
ASTM D2565	Xenon Arc Exposure of Plastics Intended for Outdoor Applications
ASTM D2583	Barcol Hardness
ASTM D2794	Impact Resistance of Coatings
ASTM D2990	Creep Testing: Creep-Rupture, Tensile Creep, Flexural Creep, Compressive Creep
ASTM D3012	Thermal Oxidative Stability: Biaxial Rotator
ASTM D3039/D3039M	Tensile Properties of Composites
ASTM D3167	Floating Roller Peel
ASTM D3294	PTFE Sheet and Basic Shapes: Tensile, Elongation, Dielectric, Specific Gravity, Porosity, Dimensional Stability (*except Internal Defects*)
ASTM D3295	PTFE Tubing, Dimensional Stability
ASTM D3330	Peel Adhesion of Tape 180 Degree Peel, Adhesion to Backing, Adhesion to Liner, 90 Degree Peel
ASTM D3354, Method B	Blocking Load of Film by Parallel Plate Method
ASTM D3359	Measuring Adhesion by Tape Test: Coating Adhesion, Tape Adhesion
ASTM D3574	Flexible Cellular Materials, Urethane Foam (Tests A, B1, C, D, E): Density, Indentation Force Deflection (IFD), Compression Force Deflection, Compression Set, Tensile
ASTM D3575	Flexible Cellular Materials: Compression Creep Suffix BB Only
ASTM D3801	Flammability of Plastics in a Vertical Position
ASTM D3950	Breaking and Joint Strength of Strapping
ASTM D4039	Reflection Haze of High Gloss Surfaces
ASTM D4060	Abrasion Resistance by Taber Abraser: Taber Abrasion, Wear Index
ASTM D4226	Impact Resistance of PVC Building Products: Impact of Siding
ASTM D4329	UV Exposure of Plastics: QUV
ASTM D4459	Xenon Arc Exposure of Plastics Intended for Indoor Applications
ASTM D4587	UV Exposure of Coatings: QUV
ASTM D4812	Unnotched Cantilever Beam Impact Resistance of Plastics
ASTM D5420	Impact Resistance by Falling Weight: Gardner Impact
ASTM D6100	Polyoxymethylene Shapes: Tensile, Elongation, Modulus, Dimensional Stability
ASTM D6262	Shapes of PAEK: Tensile Properties, Dimensional Stability, Flexural, Izod
ASTM D6713	Dimensional Stability of PVDF
ASTM D6862	90 Degree Peel Resistance
ASTM D6988	Thickness of Plastic Film
ASTM D7091	Coating Thickness (Dry Film Thickness) by Eddy Current or Magnetic Method
ASTM D7869	Xenon Arc Exposure Test for Transportation Coatings
ASTM E3	Preparation of Metallographic Specimens: Metallographic Mounts, Cross Sections

Test Method:	Test Description:
ASTM E8/E8M	Tension Testing of Metals: Percent Elongation, Reduction of Area, Tensile Strength, Tension Testing, Yield Strength, Modulus
ASTM E10	Brinell Hardness (Scales 500, 1500, 3000 kgf)
ASTM E18	Rockwell Hardness (Scales A, B, C, F, 15N, 30N, 15T, 30T)
ASTM E45	Inclusion Content of Steel
ASTM E92	Vickers and Knoop Hardness of Metallic Materials
ASTM E112	Average Grain Size (Comparison Procedure & Intercept Method)
ASTM E290	Bend Testing (*except Guided Bend*)
ASTM E313	Yellowness Index
ASTM E340	Macroetching Metals and Alloys: Macrostructure
ASTM E345	Tension Testing of Metallic Foil: Tensile Strength, Yield Strength, Elongation
ASTM E384	Microindentation Hardness: Micro-Hardness (Scales Knoop & Vickers 25 to 500g)
ASTM E407	Microetching Metals and Alloys
ASTM E1004	Electrical Conductivity by Electromagnetic (Eddy-Current) Method Conductivity of Solids (%IACS)
ASTM E1077	Estimating the Depth of Decarburization of Steel
ASTM E1331	Color by Spectrophotometry Using Hemispherical Geometry: Spectrophotometer, Color Matching, CIELAB, Reflectance
ASTM E1348	Color by Spectrophotometry Using Hemispherical Geometry: Transmittance
ASTM F36	Compressibility and Recovery of Gasket Materials
ASTM F606/F606M	Mechanical Properties of Fasteners, Washers and Rivets (*except Single Shear, Cone Proof, Compression Load, and Embrittlement*): Product Hardness, Proof Load, Axial Tension, Wedge Tension, Embrittlement, Decarburization, Carburization
ASTM F2282	Quality Assurance for Carbon and Alloy Steel (Evaluation of Spheriodization only)
ASTM G151	UV Exposure: QUV Fluorescent Light Apparatus (General)
ASTM G154	UV Exposure: QUV Fluorescent Light Apparatus, Accelerated Weathering
ASTM G155	Xenon Arc Lamp Apparatus for Exposure of Materials
ASTM G195	Wear Testing by Taber Abrader
Chamber Manual	Environmental Simulation: Thermal Shock, Temperature and Humidity Cycling Best Range: (-73 to 1100) ºC / (-100 to 2,000) ºF Best Control: ± 0.01 ºC, ± 1% Humidity (not available for all ranges)
FMVSS 206	Door Latch Testing (*except Inertial Force Test*): Door Locks
FMVSS 302	Flammability of Automotive Interior Materials (49 CFR 571.302): Burn Rate
IPC-A-600	Acceptability of Printed Circuit Boards (All Sections) Solder Coatings: Solder Thickness Holes: Nodules, Voids, Lifted Lands, Surface Plating Solder Mask: Registration, Ball Grid Array (BGA), Adhesion Pattern Definition: Conductor Width, Conductor Spacing, Annular Ring Dielectric Materials: Dielectric Thickness, Etchback, Delamination, Blister Conductive Patterns: Surface Conductor Thickness, Foil Thickness Plated Through Holes (PTH): Copper Plating Thickness, Wicking, Vias, Cracks, Inner Layer Separation (IP Separation), Hole Wall Thickness Solderability: Thermal Stress, Solder Shock
ISO 37	Tensile Properties of Rubber
ISO 48	International Hardness (IRHD): Rubber Microhardness (Type M)
ISO 75-1, -2, -3	Temperature of Deflection Under Load (DTUL, HDT)
ISO 178	Flexural Properties: Flexural Strength, Flexural Modulus, Chord Modulus
ISO 179-1	Charpy Impact Resistance
ISO 180	Izod Impact

Test Method:	**Test Description:**
ISO 188	Accelerated Aging and Heat Resistance
ISO 306	Vicat Softening Temperature (VST)
ISO 489	Refractive Index: Index of Refraction
ISO 527	Tensile Properties: Tensile Strength, Tensile Elongation, Tensile Modulus, Poisson's Ratio, Chord Modulus
ISO 868	Durometer Hardness (Scales A & D)
ISO 1817	Effects of Liquids: Fluid Resistance
ISO 2039-2	Rockwell Hardness (Scales L, R, M)
ISO 3795	Flammability of Interior Materials
ISO 4892-2	Xenon Arc Exposure
ISO 20795-1	Dentistry: Denture Base Polymers
Microscope Manual	Light Microscopy: Image Analysis, Light Microscope, Optical Microscopy
MIL-STD-202-208	Solderability of Coated Products (except Soldering Iron Method)
SAE J419	Decarburization
SAE J423	Measuring Case Depth
SAE J2283	Wheel Nut Proof Test
SAE J2412	Xenon Arc Exposure of Automotive Trim Components
SAE J2527	Xenon Arc Exposure of Automotive Exterior Materials
SEM Manual	Scanning Electron Microscopy (SEM)
UL 94	Flammability (*except HBF Test*): Horizontal Burning Test (HB), 20 mm Vertical Burning Test (V-0, V-1, V-2), 500 w (125 mm) Vertical Burning Test (5VA, 5VB), Thin Material Vertical Burning Test (VTM-0, VTM-1, VTM-2)

Dimensional Testing [1]:

Parameter/Equipment	Range	CMC [2] (±)	Comments
Linear Dimension [3] —			Dimensional measurement using:
Work Piece Measurement	Up to 1.00 in	0.00034 in	Micrometer
	Up to 25.40 mm	0.0086 mm	
	Up to 12.00 in	0.0018 in	Caliper
	Up to 304.80 mm	0.046 mm	
	Up to 0.5 in	0.00044 in	Drop gauge indicator
	Up to 12.7 mm	0.011 mm	

Parameter	Range	CMC [2] (±)	Comments
Linear Dimensions [3] —			Dimension measurements using:
Work Piece Measurement (cont)	(0.061 to 1.00) in	0.0004 in	Plug gage with digital micrometer
	(1.55 to 25.40) mm	0.01 mm	
	Up to 36.00 in	0.02 in	Steel rule
	Up to 914.40 mm	0.5 mm	
	Up to 2.00 in	0.00011 in	Microscope
	Up to 50.80 mm	0.003 mm	

Mechanical:

Parameter/Equipment	Range	CMC [2] (±)	Comments
Mass [3] —			Mass measurement using:
	Up to 1 g	0.051 mg	Micro-gram balance
	(1 to 250) g	0.0013 g	Analytical balance
	(250 to 4000) g	9 g	Lab balance
	(5 to 45) kg	0.5 kg	Load cell with gravity correction factor

[1] This laboratory offers commercial dimensional testing service.

[2] Calibration and Measurement Capability (CMC) is the smallest uncertainty of measurement that a laboratory can achieve within its scope of accreditation when performing more or less routine measurements of nearly ideal measurement standards or nearly ideal measuring equipment. Calibration and Measurement Capabilities 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 measurement 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 measurement.

[3] This test is not equivalent to that of a calibration.

The laboratory is accredited for the test methods listed above. The accredited test methods are used in determining compliance with the material specifications listed below; however, the inclusion of these material specifications on this Scope does not confer laboratory accreditation to the material specifications. Inclusion of these material specifications on this Scope also does not confer accreditation for every method embedded within the specification. Only the methods listed above on this Scope are accredited.

AMS: AMS2422, AMS2431, AMS2474, AMS2482, AMS2491, AMS2759, AMS3216, AMS3270, AMS3305, AMS3320, AMS3327, AMS3347, AMS3352, AMS3617, AMS3650, AMS3652, AMS3653, AMS3654, AMS3656, AMS3657, AMS3658, AMS3659, AMS3660, AMS3661, AMS3662, AMS3667, AMS3669, AMS3670, AMS3678, AMS4027, AMS4078, AMS4082, AMS4117, AMS4120, AMS4150, AMS4904, AMS4911, AMS5525, AMS5599, AMS5613, AMS5618, AMS5643, AMS5659, AMS5678, AMS5688, AMS5848, AMS6260, AMS6378, AMS6382, AMS6411, AMS6415, AMS6440, AMS7257, AMS7276, AMS7287, AMS-DTL-23053, AMS-QQ-A-200, AMS-QQ-A-225, AMS-QQ-A-250, AMS-QQ-S-763, AMS-R-25988, AMS-R-83485

ASTM: ASTM A29, ASTM A36, ASTM A106, ASTM A108, ASTM A194, ASTM A240, ASTM A276, ASTM A513, ASTM A582, ASTM A666, ASTM A681, ASTM A867, ASTM A967, ASTM B6, ASTM B16, ASTM B103, ASTM B152, ASTM B160, ASTM B162, ASTM B187, ASTM B194, ASTM B209, ASTM B211, ASTM B221, ASTM B333, ASTM B335, ASTM B348, ASTM B373, ASTM B438, ASTM B488, ASTM B637, ASTM B733, ASTM D1056, ASTM D1248, ASTM D1430, ASTM D1710, ASTM D2000, ASTM D3159, ASTM D3294, ASTM D3307, ASTM D3308, ASTM D3350, ASTM D3577, ASTM D3935, ASTM D3950, ASTM D4101, ASTM D4397, ASTM D4745, ASTM D4894, ASTM D4895, ASTM D4976, ASTM D5813, ASTM D5989, ASTM D6098, ASTM D6100, ASTM D6262, ASTM D6394, ASTM D6456, ASTM D6778, ASTM D6779, ASTM D7293, ASTM E1745, ASTM F15, ASTM F30, ASTM F67, ASTM F2831

Ford: Ford WSB-M2D280, Ford WSS-M2D476, Ford WSS-M4D731, Ford WSS-M4D854, Ford WSS-M4D993

IPC: IPC-A-600, IPC-6011, IPC-6012, IPC-6013

MIL: A-A-59136, A-A-59163, A-A-59588, FED-L-P-392, MIL-A-8625, MIL-A-46106, MIL-A-46146, MIL-C-5541, MIL-DTL-5541, MIL-DTL-25988, MIL-DTL-81706, MIL-DTL-85891, MIL-I-16923, MIL-I-24768, MIL-P-22241, MIL-P-46183, MIL-PRF-6855, MIL-PRF-15624, MIL-PRF-24712, MIL-PRF-32073, MIL-PRF-81733, MIL-R-8791, MIL-S-23190

Other: ANSI A14.5, AS7471, AS8660, AWWA D121, Chrysler MS-DB-75, Chrysler MS-DB-500, Chrysler PS-1207, GMW16607, IPC-A-600, Mercedes DBL-5416, Mercedes DBL-5418, FMVSS 206, FMVSS 302, ISO 898, ISO 20795, NYCT-61, USPS-T-3204

SAE: SAE J20, SAE J188, SAE J200, SAE J429, SAE J431, SAE J434, SAE J454, SAE J1127, SAE J1128, SAE J1199, SAE J1677, SAE J2045, SAE J2283

UL: 746A, 746B, 746C

Accredited Laboratory

A2LA has accredited

ADVANCED PLASTIC AND MATERIAL TESTING, INC.

Ithaca, NY

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 9th day of November 2026.

Mr. Trace McInturff, Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 0326.01
Valid to November 30, 2028

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