



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

SMITHERS
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MECHANICAL

Valid To: March 31, 2022

Certificate Number: 0363.02

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following types of tests on adhesives, sealants, plastics, polymers, natural rubber, latex and rubber products:

Using the following capabilities:

<u>Parameter*</u>	<u>Range</u>	<u>Reference Standard(s)</u>
Pressure	Up to 20,000 psi	ASTM D380
Pressure Cycling	Up to 8,000 psi	SAE J343
Vacuum	(0 to -26) in Hg	ESBR33-9R504-AA
Vibration Displacements	Up to 6 in peak to peak	SAE J1610, J2044
Vibration Frequencies	Up to 2,500 Hz	SAE J2044
Static & Dynamic Force	Up to 10,000 lbs	ESBB53-6C646-AA
Acceleration	Up to 50 g	SAE J2044
Temperature	(-70 to 232) °C	ESDG93-8260-AA; SAE J2044
Temperature Cycling	(-70 to 205) °C	GMW 14785; SAE J1610
Humidity	10% to 98% RH	ASTM 2803
Air Flow Measurement	(0.1 to 500) sccm	ESBR33-9R504-AA; GMW 16153

*Also using customer specific test methods utilizing any combination of test equipment parameters listed above.

Test:

Tensile, Elongation, Modulus

Tear Resistance

Compression Set

Durometer Hardness, Shore A, D & M

IRHD

Flex Fatigue

Dynamic Fatigue

Crack Growth

Cut Growth

Monsanto Flex Extension Cycling Fatigue

Adhesion Strength

Adhesion Between Steel Tire Cords and Rubber

Low Temperature Brittleness

Properties of Rubber in Compression

Environmental Simulation

High Temperature

Ozone Resistance

Dynamic Ozone Cracking in a Chamber

Air Oxygen Bomb

Fluid Aging

Salt Spray and Humidity

Flexural Properties

Plasticity Retention Index

Specific Gravity/Density

Rheometer (ODR)

Mooney Viscosity

Medical Glove Hole Detection

Puncture Resistance

Low Temperature Retraction

O-Ring Testing, Tensile

Test Method(s):

ASTM D412, D378, D638; ISO 37; DIN 53504

ASTM D378, D624; ISO 34-1, 34-2

ASTM D395; ISO 6505, 815-1

ASTM D2240

ASTM D1415; ISO 48, 3387

ASTM D430 Method B

ASTM D813

ASTM D1052

ASTM D4482

ASTM D413 Machine Method, D429 Methods A & B

ASTM D2229, D885

ASTM D746; ISO 812

ASTM D575

ASTM D573, D865; ISO 188

ASTM D518-99 (Withdrawn 2008)¹, D1149 (Except Method A Procedure A2 and Method B Procedure B3), D1171; ISO 1431-1, 6722-1 (Section 5.19), 7840 (Section 5.8), 19642-2 (Sections 5.4.14 & 6.4.12); SAE J1128 (Section 6.8), J1206ASTM D3395-99 Method A (Withdrawn 2007)¹

ASTM D454, D572

ASTM D471; ISO 1817

ASTM B117, D1735; ABNT NBR 6752

ASTM D790

ASTM D3194

ASTM D792, D1475, D297; ISO 1183, 2781

ASTM D2084

ASTM D1646

ASTM D5151

ASTM D120

ASTM D1329

ASTM D1414 (Section 8)

Test:**Test Method(s):**

Water Absorption of Plastics	ASTM D570
Dynamic Testing	ASTM D5992, D623 Method A, E1640
Brittleness Point of Flexible Polymers	ASTM D2137
Filiform Corrosion Resistance	ASTM D2803
Effect of Household Chemicals	ASTM D1308
Chipping Resistance of Coatings	ASTM D3170
Adhesion by Tape Test	ASTM D3359; ABNT NBR 11003
Specular Gloss	ASTM D523
Abrasion Resistance (Rotary Drum) Rubber Process Analyzer (RPA)	ASTM D5963 ASTM D5289, D6204, D6601
Staining of Surfaces	ASTM D925
BFG Cut & Chip	MT 2051.01
Resilience by Vertical Rebound, Bashore	ASTM D2632
Impact Resistance, Izod Pendulum	ASTM D256
Volume Resistivity	ASTM D991
Static and Kinetic Coefficients of Friction	ASTM D1894
DC Resistance or Conductance of Insulating Materials, Surface	ASTM D257
Heat and UV Light Discoloration of Light Colored Surfaces	ASTM D1148
Fluorescent UV Exposure of Plastics, QUV	ASTM D4329
Fluorescent Light Apparatus for UV Exposure	ASTM G154
Xenon Arc Light Apparatus for Exposure on Non- Metallic Materials	ASTM G155
Melt Flow Rates of Thermoplastics by Extrusion Plastometer	ASTM D1238 Method A; ISO 1133
Abrasion Resistance by the Pico Abrader Method	ASTM D2228
Abrasion Resistance Coated Fabrics, Taber Stiffening at Low Temperatures, Gehman	ASTM D3389 ASTM D1053 Method A; ISO 1432
Compressive Properties of Rigid Plastics Dielectric Strength, AC	ASTM D695 ASTM D149

Test:**Test Method(s):**

Low Temperature Bend Test, Coated Fabrics	ASTM D2136
Compression Stress Relaxation	ASTM D6147; ISO 3384
Flammability	FMVSS 302; ASTM C1166; UL 94
Floating Roller Peel Resistance of Adhesives	ASTM D3167
Tensile Green Strength of Unvulcanized Rubber	ASTM D6746, D3182
Tensile Properties of Thin Plastic Films	ASTM D882
Tear Propagation Resistance of Plastic Film and Thin Sheeting	ASTM D1938
Resistance of Plastics to Chemical Reagents	ASTM D543 Method A
Viscoelastic Properties DMTA (Dynamic Mechanical Thermal Analysis)	ASTM E1640
Conditioning of Plastics for Testing	ASTM D618
Rubbers – Standard Temperatures for Testing	ASTM D1349
Volatile Loss from Plastics Using Activated Carbon	ASTM D1203
Burst	ISO 7840 (Section 5.3)
Vacuum Collapse	ISO 7840 (Section 5.4)
Volume Change	ISO 7840 (Section 5.5)
Mass Reduction	ISO 7840 (Section 5.6)
Cold Flex	ISO 7840 (Section 5.10)
Dry Heat	ISO 7840 (Section 5.12)
Oil Resistance	ISO 7840 (Section 5.13)
Adhesion	ISO 7840 (Section 5.14)

¹This 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

SMITHERS

Akron, OH

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 June 2020.

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

Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 0363.02
Valid to March 31, 2022

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