



An independent engineering and testing laboratory engaged in the mechanical, electrical and flammability testing of composites, adhesives, ceramics, thermoplastics, thermosets, elastomers and other nonmetallic materials. Element Los Angeles has over 60 years of experience and an international reputation for materials and industry experience.

Element Los Angeles is a pioneer in aerospace composites testing. Our experienced multidisciplinary staff continues to be active in industry groups such as CMH17, SAMPE, ASTM and the FAA Fire test handbook. This assures that testing follows state-of-the-art methods and procedures. Element Los Angeles focuses on providing accurate reliable test data and comprehensive test reports. This facility is accredited by A2LA in the field of mechanical testing per ISO/IEC 17025 as shown on A2LA certificate 0096.01. Element Los Angeles is also approved by Nadcap and many key aerospace, automotive and electronics firms.

WHO WE ARE

Element Los Angeles is part of a global network of Element laboratories and experts specializing in materials testing, product qualification testing and failure analysis. Element is the recognized leader in materials technology. We support our customers by utilising our analytical expertise and knowledge. This ensures quality and integrity for advanced industrial products throughout the supply chain. With over 180 years of collective experience, we are the preferred partner for our customers' most critical testing needs.

INDUSTRIES WE SERVE

Our accredited and industry-approved laboratories provide materials testing, product qualification testing and failure analysis for companies in multiple sectors:

- Aerospace
- Oil & Gas
- Transportation
- Building & Industrial Construction
- Other High-Tech Industries

MECHANICAL TESTING

- Static, Dynamic and Fatigue Testing
- Tensile, Flexural, Compressive and Shear
- GIC & GIIC, Interlaminar Crack Growth
- KIC & dadN, Fatigue Crack Propagation
- Shear Modulus of adhesives by the KGR method
- Stress/Strain Instrumentation & Analysis
- Laser & Knife-Edge Measurement
- Hydrostatic and Cyclic Burst Pressure Testing
- Random Spectrum Fatigue
- Expert Specimen Preparation from Advanced Composites
- Structures Testing with Multichannel Data Acquisition
- Impact testing via Izod, Charpy, Tensile and Instrumented Impact
- Compression After Impact Testing (CAI)
- Ceramic and Other High Temperature Material Testing
- Hydraulic Grips up to 110 Kip
- Test Temperature Range -320° F to 2400° F

PHYSICAL TESTING

- Prepreg Evaluation – Resin Content, Volatile & Fiber Content, Flow, Tack, Gel Time & Drape
- Acid Digestion – Fiber Volume, Resin Content, Void Content & Density
- Ignition Loss of Cured Glass Composites
- Moisture Content
- Hardness – Barcol, Rockwell, Durometer A, D, M and oo
- Specific Gravity / Density
- Torsional Stiffness

FLAMMABILITY TESTING

- NBS Smoke Density
- Toxicity
- OSU Heat Release Rate
- FMVSS 302
- FAA Horizontal & Vertical Ignition
- Testing per Airbus ABD 0031 and Boeing BSS 7230, BSS 7238, BSS 7239, BSS 7322

THERMAL ANALYSIS SERVICES

- Dynamic Mechanical Analysis – DMA
 - Glass Transition Temperature (T_g) by DMA
- Thermomechanical Analysis – TMA
 - Coefficient of Expansion - CTE by TMA
 - Glass Transition Temperature (T_g) by TMA
- Differential Scanning Calorimetry – DSC
 - Thermal Conductivity by MDSC
 - Melt Temperature by DSC
 - Glass Transition Temperature (T_g) by DSC
- Thermogravimetric Analysis - TGA
- Heat Deflection Temperature – HDT
- Thermal Shrinkage of Yarn & Cord
- Melt Flow Index
- Vicat Softening Temperature
- Brittle Point
- Temperature Retraction (TR₁₀)

METALLOGRAPHY/METALLURGICAL

- Metallography
- Photomacrography
- Photomicrography
- Metallographic Preparation
- Failure Analysis

ELECTRICAL PROPERTIES EVALUATION

- Dielectric Constant & Loss Tangent
- Volume & Surface Resistivity
- Insulation Resistance
- Dielectric Strength
- “Q” Resonance
- Arc Resistance

SPECIMEN PREPARATION SERVICES

- Prepreg layup by Autoclave, Press Cure, Out of Autoclave
- Accurate Specimen Layout and Panel Mapping
- Precision Cutting and Grinding
- High Accuracy Composite Hole Drilling
- Complex Profile Machining
- Surface Finish to 6μ RMS
- Tabbings, Potting & Bonding
- Coating Thickness & Weight

ENVIRONMENTAL TEST SERVICES

- Temperature/Humidity Exposure
- Thermal Shock & Temperature Cycling
- Durability & Life Cycle Testing
- Thermal Oxidative Stability (TOS)

CUSTOM & SPECIAL SERVICES

- Strain Gaging – Low & High Temperature
- Fixture Design / Fabrication
- Injection Molding of Test specimens
- Medical Device Testing
- A & B-Basis Allowables Testing
- Failure Analysis
- Recertification: Prepreg & Adhesive

THE ELEMENT ADVANTAGE: POWERED BY A GLOBAL NETWORK

Partnering with Element means more than working with a single lab—it's gaining access to a global network of nearly 270 accredited laboratories and 9,000 experts across materials science, product qualification, and regulatory compliance. From composites testing in Los Angeles to environmental simulation, EMI/EMC, and non-destructive testing across North America and Europe, our unified capabilities deliver seamless, end-to-end support.

Whether you're validating a next-generation aerospace component, troubleshooting field failures, or developing materials for high-temperature, high-stress environments, Element provides:

- **Unmatched technical expertise** with over 180 years of combined testing knowledge
- **Multi-site coordination** for efficient, scalable test programs across industries
- **Faster turnaround and simplified logistics** by tapping into specialized centers of excellence
- **Trusted results backed by industry approvals**, including Nadcap, A2LA, FAA

Element Los Angeles is your gateway to this comprehensive network—offering localized expertise with global reach, so your mission-critical materials and products meet the highest standards of performance, safety, and reliability.

Trust the certainty of Element.

