ENSURING AVIATION SAFETY & INNOVATION WITH ELEMENT'S ADVANCED TESTING SERVICES

As the business and general aviation sectors grow in complexity—driven by evolving customer expectations, advanced materials, sustainability mandates, and urban air mobility innovations—the need for rigorous testing and product validation has never been more critical. Operators and manufacturers must ensure that every aircraft system, structure, and material not only meets performance targets but also complies with the stringent safety, quality, and regulatory standards required by agencies such as the Federal Aviation Administration (FAA), the European Union Aviation Safety Agency (EASA), and industry specifications like RTCA DO-160, MIL-STD-810, ASTM, and NADCAP.

Whether it's evaluating fatigue life, validating composite bonding, or simulating harsh environmental conditions, comprehensive testing is essential to deliver safe, airworthy, and reliable aircraft. At Element Materials Technology, we help customers meet these demands by providing advanced aerospace testing services that accelerate development, support certification, and ensure sustained operational performance—ultimately protecting lives, enhancing brand reputation, and enabling long-term success in the aviation market.

COMPREHENSIVE AEROSPACE TESTING CAPABILITIES

STRUCTURAL & MATERIALS TESTING

- Fatigue & Fracture Analysis
- Non-Destructive Testing (NDT) & Destructive Testing (DT)
- Coatings Evaluation (Magnetic Particle, Passivation, etc.)
- Adhesive Bond Integrity & Material Compatibility

ENVIRONMENTAL & IMPACT SIMULATION

- Environmental Testing (Humidity, UV, Salt Fog, Temp Cycling)
- Bird & Hail Strike Simulation
- Sustainable Aviation Fuel (SAF) Compatibility & Testing
- Fuel System Testing and Corrosion Resistance

KEY APPLICATIONS IN BUSINESS & GENERAL AVIATION

GREEN & SUSTAINABLE AVIATION

Element empowers sustainable innovation by ensuring your aircraft meet high performance and environmental standards. From SAF testing to corrosion prevention, we support your goals for eco-friendly, fuel-efficient aircraft that meet evolving regulatory demands.

URBAN AIR MOBILITY (UAM)

We help UAM manufacturers validate structural integrity, fatigue resistance, and safety performance through advanced materials testing, impact analysis, and certification support—enabling safer and faster time-to-market for next-gen air transport solutions.

AIRCRAFT MODERNIZATION & UPGRADES

Integrate new tech with confidence. Whether enhancing fuel efficiency or replacing legacy systems, Element's full suite of aerospace testing ensures your upgraded aircraft maintains compliance, extends lifecycle, and improves operational efficiency.

WHERE YOU'LL FIND US

Our strategically located labs offer localized service with global quality:

- Huntington Beach, CA
- Rancho Dominguez, CA
- Fort Myers (NIC), FL
- Enfield (PTI), CT
- Jupiter, FL
- Huntsville, AL
- Charlotte, NC

WHY PARTNER WITH ELEMENT?

- Ensure Compliance with FAA, EASA & OEM Standards
- Maximize Safety, Reliability & Maintainability
- Enable Green Innovation & Urban Air Solutions
- Accelerate Development with Trusted Testing Experts
- Gain Custom Solutions & Speed to Market

LET'S ELEVATE AVIATION TOGETHER

Learn more: element.com/aerospace
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