

Global Composites Services

Our composite test experts provide leadership in ASTM, ISO, Nadcap committees and have over 25 years experience in materials testing, including thermoset and thermoplastic composites, laminates, fiber reinforced composites, core materials, resins, films and adhesives). At Intertek, our experts have the ability to produce accurate and fast results using state-of-the-art test equipment. The services offered by our composite test centers are independent and confidential.

We are leaders in data generation, and specialize in material characterization, quality control, and problem solving.





Material Characterization

- Specializing in Quick Turn of Mechanical Evaluations including tension and compression, poisson's ratio, bearing bypass, damage resistance, compression after impact, combined compression loading (CLC), multiaxial impact, pendulum impact, v-notch shear / rail shear, lap shear of adhesively bonded joints, short beam shear, floating roller peel, climbing drum peel and more.
 - State-of-the-art equipment
 - Up to 250kN load cell capacity
 - High Heat Extensometers and 8 Channel Strain Gage measurement for intricate bearing bypass assessments, poisson's ratio and more
 - Elevated / Reduced Temperature Chamber Testing
- Environmental Simulation / Conditioning at 23C / 50%RH and/or moisture conditioning per ASTM D5229 to simulate intensive end-use environments. Exposure to chemical, electrical, flammability and more.
- Analytical Services: DMA, TMA, TGA, DSC, IV, Karl Fischer.

QC/Incoming Raw Material Checks (prepreg, layups, resin systems)

- Evaluate adhesives, films and resins used in the production of laminated materials or resin and fiber for thermoplastic injection molding composites.

Problem solving

- Intertek generates valuable data for delaminating evaluations, monitoring wetout, optimizing cure, and reducing cycle times.

Common Composites Tests

Tensile: Composite Materials ASTM D3039, Sandwich Core Materials, ASTM C297, Open-Hole ASTM D5766, Plastics ASTM D638

Compression: Composites ASTM D3410, Matrix Laminates ASTM D6742, Combined Loading Compression (CLC) ASTM D6641, Plastics ASTM D695, Sandwich Beam ASTM D5467, Open Hole ASTM D6484, Strength of Damaged Plates ASTM D7137, Sandwich Cores ASTM C365, Rigid Cellular Plastics ASTM D1621

Flexural: Matrix Composites ASTM D7264, Four-Point Bending, ASTM D6272, Plastics ASTM D790, Core Shear ASTM C393

Shear: Short Beam ASTM D2344, In-Plane Shear ASTM D3518, Beam Flexural ASTM C393, V-Notched Beam ASTM D5379, In-Plane Shear ASTM D3846, Puncture ASTM D732, Shear Properties of Sandwich Core Materials ASTM C273, V-Notched Rail Shear ASTM D7078, Pull-Through ASTM D7332

Impact: Damage Resistance ASTM D7136, Multiaxial Impact ASTM D3763

Lap Shear: Metals ASTM D1002, Adhesively Bonded Plastics ASTM D3163, Sandwich Joints ASTM D3164, Adhesive Joints ASTM D3528, Thick Adherend Metal ASTM D5656, Adhesion for Fiber Reinforced Plastics ASTM D5868

Fracture Toughness: Mixed Mode ASTM D6671, Mode I ASTM D5528

Peel: Bond Strength / Ply Adhesion ASTM F904, Climbing Drum of Adhesives ASTM D1781, Adhesion ASTM D3330, Adhesion to Rigid Substrates ASTM D429, T-Peel of Adhesives ASTM D1876, Floating Roller Peel of Adhesives ASTM D3167

Analytical: Density of Core Materials ASTM C271, Solids Content ASTM D3529, Volatiles Content ASTM D3530, Ignition Loss ASTM D2584, Void Content ASTM D2734, Content Analysis ASTM D3171, FTIR ASTM E168

Thermal: DSC ASTM D3418, DMA ASTM D4065, Flexural DMA ASTM D7028, TGA ASTM E1131, TMA ASTM E831

And More...

Intertek Europe

+ 31 (0)88 126 8888

Intertek Middle East & Africa

+ 971 (0)506627060

Intertek Americas

+1 (413) 499-0983

Intertek APAC

+91 (22) 42450204

www.intertek.com

The Intertek Advantage

Intertek is the leading quality solutions provider to industries worldwide. From auditing and inspection, to testing, training, advisory, quality assurance and certification, Intertek adds value to customers' products, processes and assets. With a network of more than 1,000 laboratories and offices and over 36,000 people in more than 100 countries, Intertek supports companies' success in a global marketplace. Intertek helps its customers to meet end users' expectations for safety, sustainability, performance, integrity and desirability in virtually any market worldwide.

For more information please visit: www.intertek.com/composites

For more information about Intertek testing capabilities, please contact us at: chemical.materials@intertek.com.