



Datapoint

Reporting on advancements in material testing and data management

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Full Composites Testing Capabilities



DatapointLabs announces expanded capability for the testing of structured composites, with the installation of a new 250 KN Instron UTM with environmental chamber and full video/DIC capability. The new NADCAP-compliant machine can perform tests over a -60C to 200C temperature range. It is capable of testing high strength materials, such as unidirectional (UD) and woven carbon fiber (CFRP) composites.

The addition of this equipment now provides a full complement of testing capabilities for composites, including tensile, compressive, shear, and open hole tests. Testing for dynamic mechanical properties of composites also is available, including cure behavior and volumetric capabilities.

(more...)

The full list of relevant tests always can be found on our online Test Catalog:

- [M-204C](#) Tensile Stress-Strain, Strength, and Modulus for Composite Materials
- [M-209](#) Combined Loading Compression (CLC)
- [M-219](#) Shear Stress-Strain
- [M-210](#) Compressive Stress-Strain, Strength and Modulus
- [M-034](#) Short Beam Shear Strength
- [M-050](#) Open Hole Tension (OHT)
- [M-051](#) Open Hole Compression (OHC)
- [D-027](#) Volumetric Cure Shrinkage
- [M-041](#) Lap Shear Strength
- [M-600](#) DMA—Tensile/Compressive (0.1-100 Hz)

TestPaks® for Composites Simulation

The new composite test capabilities allow for comprehensive characterization for simulation of structured composites using software such as DIGIMAT and Altair Multiscale Designer. The following *TestPaks* are available:

- [G-170](#) DIGIMAT MX Elastic eX-E
- [G-173](#) DIGIMAT MX Elasto-plastic with Damage (EP+D)
- [G-176](#) DIGIMAT MX Warpage (Thermomechanic)
- [G-190](#) Altair Multiscale Designer for Unidirectional (UD) Composites
- [G-706](#) Abaqus Orthotropic Composite
- [G-794](#) LS-DYNA Laminated Composite Fabric (MAT_054)

Composite Layup Sample Preparation

DatapointLabs announces services for the preparation of composite layup panels through its Illescas sister laboratory.

Panels manufacturing capabilities

- Monolithic panels of carbon and glass fiber, preimpregnated with thermoset resin materials
- Monolithic panels of dry fiber with thermoset resin materials by RLI (Resin Liquid Infusion)
- Sandwich panels of honeycomb and preimpregnated material skins

Test specimen preparation

- Sample preparation techniques including tabbing, machining, grinding, drilling, riveting, instrumentation
- Sample inspection techniques (dimensional control, ultrasonic inspection)

Upcoming Events

DatapointLabs Technical Center for Materials will be participating at the following technical conferences. Look for us if you are attending virtually or in person, or [contact us](#) about our participation:

- Join us at the [SPE ACCE 2020 Virtual Forum](#), Sept 9-11, 2020. DatapointLabs is an Associate Sponsor.
- Join us at the [SPE Thermoplastic Elastomers Virtual Conference](#), Sept 15-16, 2020. DatapointLabs is a Silver Sponsor.
- See you at [CARHS Automotive CAE Grand Challenge](#), Sept 29-30, 2020; Hanau, Germany. Find us in Exhibitor Stand 5.
- Join us at the [Altair Technology Conference 2020 Virtual Global Event](#), October 5-7, 2020. DatapointLabs is a member of the Altair Partner Alliance.
- Join us at the [2020 Global 3DEXPERIENCE Modeling & Simulation Virtual Conference](#), October 21-22, 2020. DatapointLabs is a Premier Sponsor.
- See you at [NAFEMS 2020 Nordic Regional Conference](#), Nov 16-17, 2020; Gothenburg, Sweden.
- See you at [ESI Forum in France 2021](#), February 2, 2021; Paris, France.