# Datapoint Reporting on advancements in material testing and data management

# Volume 27.1

# DatapointLabs Is Moving, Looks to Future Expansion

After more than 25 years of providing expert material testing services, DatapointLabs has outgrown our current facilities and plans to move into a newly-renovated building in the Summer of 2021. The new location at 21 Dutch Mill Road includes fully equipped laboratory space dedicated to testing capabilities for mechanical, creep, thermal, and rheological properties. There is also room for future expansion, both in capacity of current testing services, as well as the potential addition of new services.

The plan is to accomplish the move in stages to minimize downtime, but it is important to note that there may be delays for a few weeks in May 2021. We request our clients to please plan ahead for your testing requests so we can meet your needs before our move.

## **DatapointLabs Partner Showcase: Altair**

DatapointLabs/Altair Partnership for Accurate and Efficient Simulation of Composites

DatapointLabs and Altair have recently partnered to support accurate and efficient simulation of composite materials for CAE product development. Together, we provide CAE material files that are directly informed by DatapointLabs' precise materials testing and characterization for use with Altair Multiscale Designer<sup>®</sup>, Altair's flagship software tool for the simulation of composite materials.

DatapointLabs offers three TestPaks<sup>®</sup> for all common composite materials:

- <u>G-190</u> Altair Multiscale Designer for Unidirectional Composites
- G-191 Altair Multiscale Designer for Woven Composites
- G-192 Altair Multiscale Designer for Chopped Fiber Composites

These TestPaks offer timely, precise and relevant material data that is characterized and formatted for seamless CAE simulation input, and include:

- Material testing to software requirements
- Test reports and raw material property data
- Material model selection and parameter conversion
- CAE-simulation-ready material files

TestPaks for Altair Multiscale Designer include both required testing for composite mechanical properties, as well as optional add-in testing for composite physical properties, and matrix mechanical and physical properties. Stochastic characterization – under CMH-17 B18 or similar standard – may also be included. Further, multiple environmental test conditions are available: room temperature dry (RTD), cold temperature dry (CTD), and elevated temperature wet (ETW). Testing may be carried out at static, quasi-static, or dynamic strain rates, as preferred. Measured physical material properties from raw stress-strain curves and DIC measurements are then post-processed into Altair Multiscale Designer material models for subsequent CAE simulation.

Harness the combined expertise of both DatapointLabs and Altair in your CAE composite product development.

### Advanced Crash Material Testing and Models for Altair RADIOSS

DatapointLabs offers <u>TestPaks for Altair RADIOSS</u> and has added testing and fitting to support the /FAIL/TAB1 and /FAIL/BiQuad failure models (see the <u>datasheet</u>).

In addition, DatapointLabs is contributing to Altair's newly launched Material Data Center. Example data from DatapointLabs will be available on the Material Data Center from April 2021 onward, to support CAE users in their decision for materials testing.



strengthening the materials core of manufacturing enterprises

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Unidirectional continuous fibers



continuous fibers

is safe and well.

**2020 Pandemic Interruptions** 

clients!

DatapointLabs is grateful to you, our

With your support, we have continued to grow despite the challenges of the

pandemic. We could not have done it

without you. We hope that everyone



Chopped Fiber discontinuous fibers