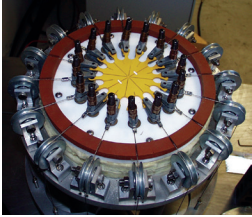


Axel Products, Inc.



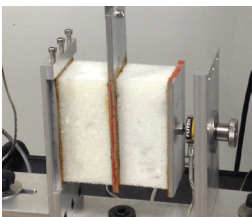
Elastomer Testing

Axel Products, Inc. provides physical testing services, material model fitting services, and training for engineers and analysts. The focus is on the characterization of nonlinear materials such as elastomers and plastics.

Data from Axel is used in finite element analysis codes such as Abaqus, ANSYS, Endurica, LS-Dyna, and MSC Marc.



Plastic Testing



Foam Testing

Testing Services

Elastomer Characterization

Simple Tension, Pure Shear, Equal Biaxial, Simple Shear, Volumetric Compression

Dynamic and Viscoelastic Characterization

Dynamic Vibrations, Acoustic Frequency Experiments

Plastic Characterization

Tension, In-plane Compression, and Shear Tests

Foam Characterization

Compression, Shear and Dynamic Experiments

Durability and Crack Growth

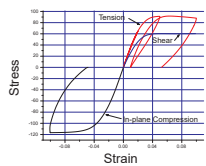
Fatigue Crack Growth and Cyclic Fatigue

High Speed Experiments

Strain Rate Sensitivity, Temperature Sensitivity

Thermal Properties

Thermal Conductivity, Thermal Diffusivity, Thermal Expansion, Specific Heat



Data Services

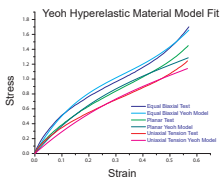
Data Fitting Services

Elastomer and Foam Material Models

Hyperelastic, Mullins, Rate Sensitivity, Viscoelasticity, Hyperelastic plus Plastic

Plastic Material Models

Elastic, Elastic-Plastic, Cyclic Elastic-Plastic



Data Fitting



Testing and Analysis Workshop

Training

Material testing, FEA material model development, and model verification benefit from an integrated approach. Axel Products co-hosts workshops with major FEA vendors Abaqus, ANSYS, Endurica, and MSC Software.



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Technical Information

Visit us at www.axelproducts.com to view or download technical papers and test briefs. Topics include:

- Testing Elastomers for Hyperelastic Models
- Testing Plastics For FEA
- Measuring Dynamic Properties
- High Strain Rate Experiments

