



TestPaks

Material Testing and Parameter Conversion for Your CAE

TestPaks for LS-DYNA

- G-771 LS-DYNA High Speed Tensile Rate Dependent Model (MAT_019 or MAT_024 or MAT_089)
- G-771V LS-DYNA Validated High Speed Tensile Rate Dependent Model (MAT_019 or MAT_024 or MAT_089)
- G-772 LS-DYNA High Speed Foam Model (MAT_083 or MAT_163)
- G-776 LS-DYNA GISSMO Failure Model
- G-778 LS-DYNA SAMP-1 Semi-Analytical Model for Plastic (MAT_187)
- G-780 LS-DYNA Hyperelastic (MAT_027)
- G-782 LS-DYNA Hyperviscoelastic Rubber (MAT_077)
- G-784 LS-DYNA Simplified Rubber with Rate Dependency (MAT_181)
- G-790 LS-DYNA Forming (Barlat 3-parameter model: MAT_036)
- G-791 LS-DYNA Transversely Anisotropic Elastic Plastic (MAT_037)
- G-792 LS-DYNA Isotropic Elastic (MAT_001)
- G-793 LS-DYNA Plastic Kinematic (MAT_003)
- G-794 LS-DYNA Laminated Composite Fabric (MAT_054)

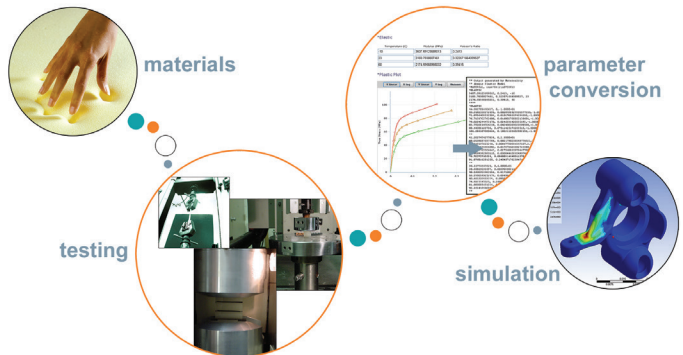
Advanced failure model calibration for metals and plastics:

- G-776I LS-DYNA MAT_024+GISSMO shell element failure model for metals
- G-778I LS-DYNA SAMP+GISSMO shell element failure model for ductile plastics (MAT_187+GISSMO)

Material properties data, test reports, and CAE material files are delivered digitally to your Matereality database.

Get 10% off

when you set up a Matereality Workgroup Material DatabasePro to store and manage all of your materials information.

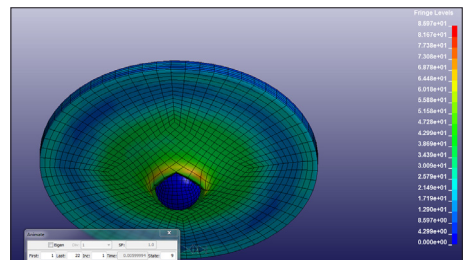
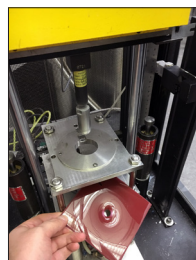


TestPaks include:

- Material testing to software requirements
- Material model selection and parameter conversion
- CAE-ready material files

CAETestBench for LS-DYNA

- V-101 Falling Dart Impact Validation for LS-DYNA Crash Material Models (MAT_024)



Dynamic impact validation of LS-DYNA simulation for a plastic using a falling dart test.



CAETestBench validations include:

- Physical test on a standardized geometry
- Simulation of the test
- Validation by comparing simulation to test results

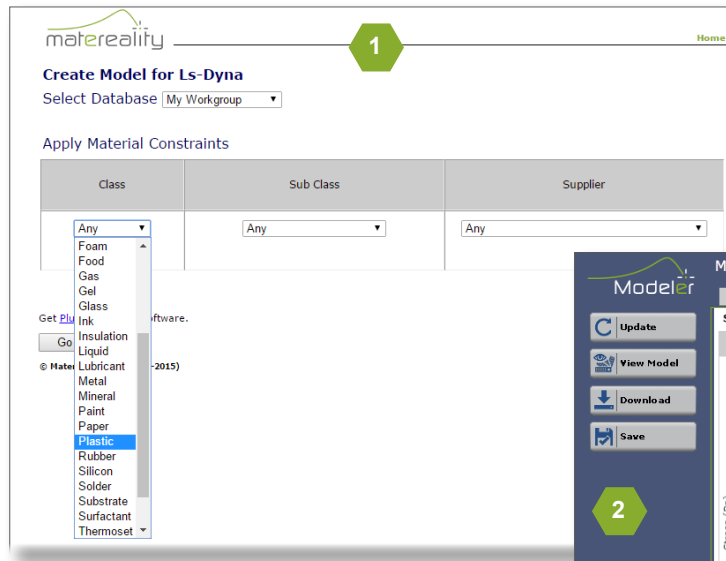
Applus⁺
DatapointLabs



View our Test Catalog

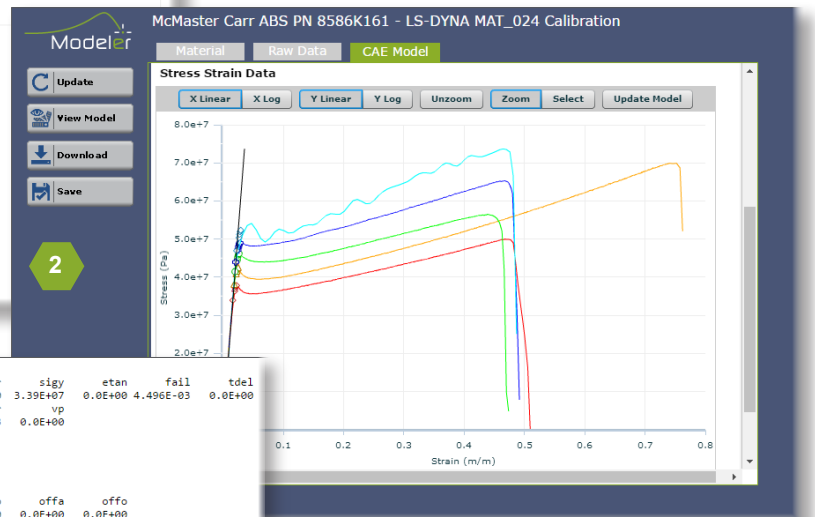
matereality CAE Modeler for LS-DYNA

Matereality locates materials in your database which have the property data required by the specified LS-DYNA material model (MAT_019 or MAT_024 or MAT_089), and converts the data into a CAE material file formatted for input to the LS-DYNA solver.



How it works:

1. Locates relevant materials for your model
2. Converts properties to model parameters; you can fine-tune the model
3. You can download the CAE material file to use directly, or save it to your CAE Materials library



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*MAT_PIECEWISE_LINEAR_PLASTICITY
$# mid ro e pr sigy etan fail tdel
$# 0 0.0E+00 2.067E+09 0.0E+00 3.39E+07 0.0E+00 4.496E-03 0.0E+00
$# c p lcss lcsr vp
$# 1002 1003 0.0E+00
$#
$#
*DEFINE_CURVE
$# lcid sidr sfa sfo offa offo
$# 1002 0 1.0E+00 1.0E+00 0.0E+00 0.0E+00
$# eps es
$# 2.163E-03 3.637E+07
$# 2.705E-03 3.690E+07
$# 3.406E-03 3.75E+07
$# 4.188E-03 3.776E+07
$# 4.496E-03 3.778E+07
*DEFINE_CURVE
$# lcid sidr sfa sfo offa offo
$# 1003 0 1.0E+00 1.0E+00 0.0E+00 0.0E+00
$# A1 O1
$# 1.0E-02 1.0E+00
$# 1.0E-01 1.127E+00
$# 1.0E+00 1.222E+00
$# 1.0E+01 1.295E+00
$# 1.0E+02 1.385E+00
    
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