matereality

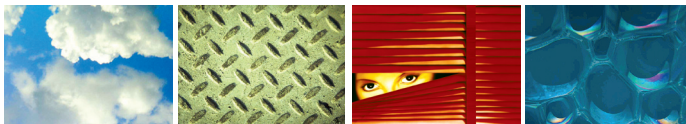## Material Data Server
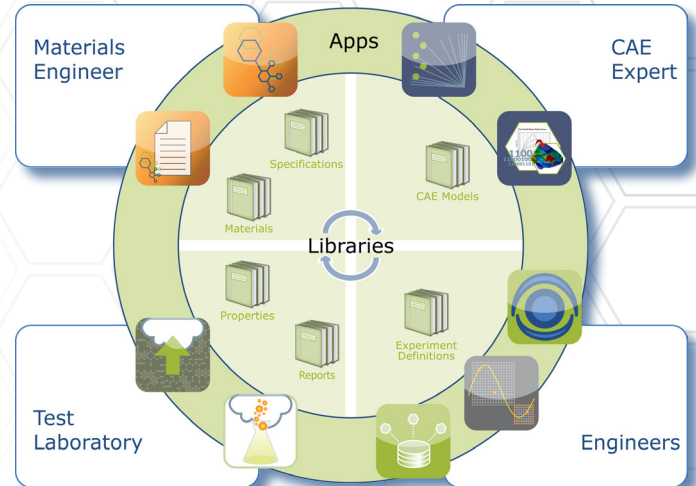
Enterprise Solution

Material DataServer

Matereality offers the building tools and engineer-focused software to allow your entire enterprise to collect, share, and use all material data in full interactive detail. The Material Data Server provides a single platform for the storage and deployment of comprehensive materials information. The system is designed for site-wide or enterprise-wide deployment so that users can access the information they need at their desktops directly over the intranet. This technology permits enterprises to create a 365/24/7 on-line resource that provides selective access to materials information at all levels within the organization: procurement, manufacturing, quality, product engineering, research and development.

Your Material Data Server
Store, view, search, and edit multiple databases all in one place. Users may be organized into an unlimited number of Workgroup Databases. Discrete, interconnected libraries hold different kinds of materials information: properties data, CAE material cards, test reports, specifications. There are truly no limits!

Access Control
It's your data - you control it. Make data Public, Private, Hidden, or accessible only to your workgroup. Grant or remove access to individual users or workgroups.

Collaboration
Share richly detailed data with colleagues by e-mail link, or embed the Viewer into your internal documents and web media.

Traceability
Each dataset is supported by a Data Certificate which provides complete traceability. Information includes test techniques and parameters, sample and specimen details, date, and accreditation.
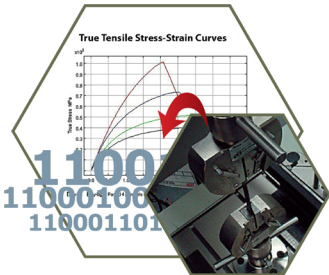
Governance
As Data Server Administrator, see a bird's-eye view of the entire group's data. Change access, add or remove members without losing data, and act for users. Control and track usage, and set data presentation, units, and search preferences.

DATA LIMIT ∞

Software

Your data server forms a centralized core, connected to a suite of software to help enterprise employees understand and use their material data in a consistent way. All software is browser based, requiring no download to client computers. All common browsers are supported.
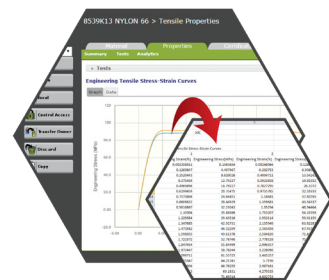
Loader

The **Loader** allows users to populate their own material database. Data can be loaded, copied from other databases, or imported from a variety of file formats, including CAE material model files.

- Easy upload of both simple and complex material data
- Copy feature downloads an editable copy of any material data on Matereality for modification
- Optional DataPipes Import feature reads material data from test instruments into your database
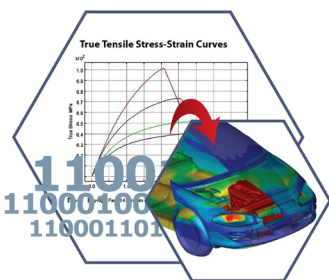- Fit data to equations

Viewer

The **Viewer** is used to view and analyze material data of any complexity.

- Trends and dependencies become apparent
- One-click export to Excel
- Automated unit conversion
- Detailed data inspection and curve interrogation, including zoom
- Data Certificates are provided to ascertain reliability of data
- Collaboration and sharing tools
- Embed views inside internal documents, web sites, presentations
- Access control and transfer of data between team members

Modeler

The **Modeler** transforms raw material data into CAE-ready input material cards.

- Simple elastic, elastic-plastic, to rate-dependent, viscoelastic, hyperelastic material models for FEA, plus injection-molding simulation parameters
- Includes data mining robots to identify the correct data needed for a material model
- A graphical user interface allows editing and fine-tuning of the material model parameters
- Integrated inside Abaqus/CAE, ANSYS Workbench, Moldex3D, SIMPOE, and SolidWorks

Analyzer

The **Analyzer** provides analytical tools to compare and contrast materials.

- View historical trends
- Automated cross-plotting of comparable curve data
- Statistical error banding to assess the variability of curve data

Matereality Software

Matereality Material Data Management (MDM) software is available for individual or group access. Systems can be configured for site-wide or enterprise-wide use. All databases offer full access control — keep your data private, or showcase it to the world.

Personal DatabasePro

Build your own database! Perfect for a single user, a Matereality Personal Database lets you store all your material data in one highly manageable, secure place. Data loading and editing is straightforward and accurate. Easily export raw data to Excel or models to CAE.

Workgroup DatabasePro

A Workgroup Database allows a group of users to access the same pool of data from any location and for unique purposes. Workgroup databases allow for rich collaboration and "I see it the way you see it" views of data and CAE models. The administrator can consolidate members' individual data, track usage, and create various access settings.

Material Supplier Database

Offer your material data to your clients in full interactive detail. The Material Supplier Database is a fully scalable solution to store and showcase detailed data on all of your materials, no matter how complex — you can never outgrow your database. You and your clients can apply powerful software for advanced plotting of simple and complex data accompanied by analytics to instantly visualize data trends. Convert units, zoom, interrogate curves, share, or export data to Excel or CAE, all with the click of a button. Maintain full access control on each piece of data — keep it private, or share it selectively with your customers, prospects, and collaborators.

Material Data Server

Matereality Data Server enables the in-house deployment of a centralized materials data knowledge resource and productivity software that automates materials-related tasks performed by different kinds of engineers within an enterprise. MDS may be deployed site-wide, or enterprise-wide. Users can access the central core via specially tailored apps, and view information in the format best suited for their need, directly from their desktops. The Material Data Server can be customized to fully mimic the data control, collaboration, traceability and governance requirements of the enterprise.

"Product innovation success relies on centralized data and knowledge resources."
— *Hubert Lobo, President and CTO*

matereality

strengthening the materials core of manufacturing enterprises

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