

MaterialCenter™

Materials lifecycle management

What is MaterialCenter?

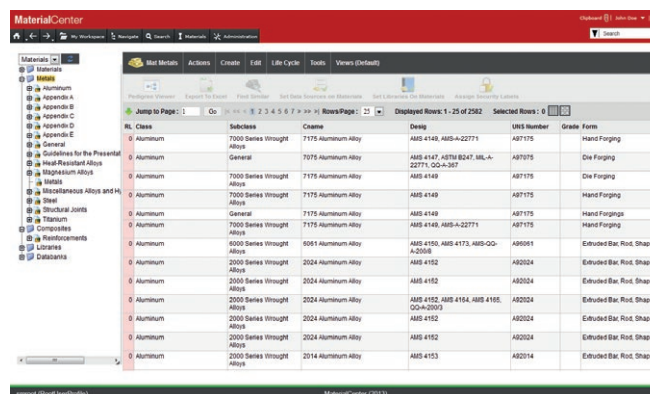
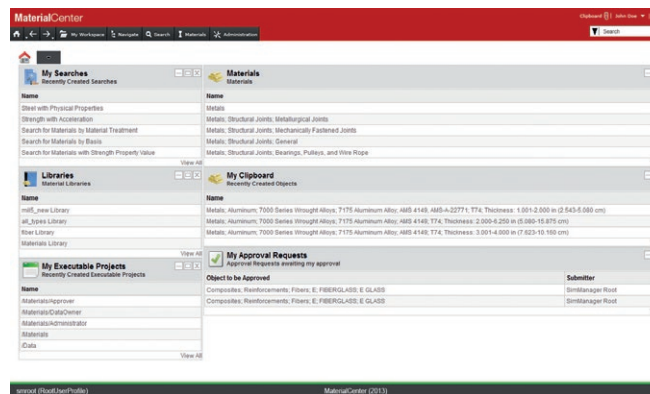
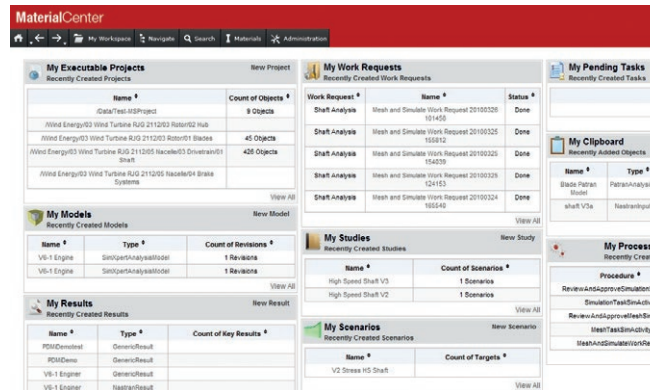
MSC Software's MaterialCenter – a Materials Lifecycle Management System – is designed to link material specialists to engineering simulation. A process and data management system, MaterialCenter automatically captures the data from integrated processes ensuring full traceability across the enterprise and throughout the product lifecycle. MaterialCenter addresses the unique requirements of exponential growth of complex materials in driving product innovation (plastics, composites) MaterialCenter works directly with many commercial CAE products including include many of MSC's flagship products, MSC Nastran, MSC Fatigue, Marc, Fatigue Testing Services, and e-Xstream Digimat.

Why is MaterialCenter right for your company today?

Drawn from the collective experience of the world's largest OEM's, MaterialCenter is the single point of entry for all of your materials related activities including physical test data entry and reduction, multi-scale materials modeling, approval workflow and the export of simulation-ready data to analysis. This guarantees that engineers are using a consistent source of approved materials derived from traceable integrated processes. The result is improved simulation fidelity, reduced data loss and elimination of tedious manual data management activities, empowering engineers to focus on driving new and innovative products. Proven scalability to 100,000's of processes and petabytes of data ensures that MaterialCenter meets the needs of material and simulation engineers alike for many years to come.

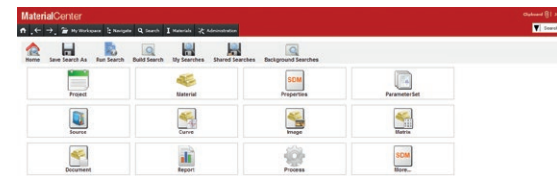
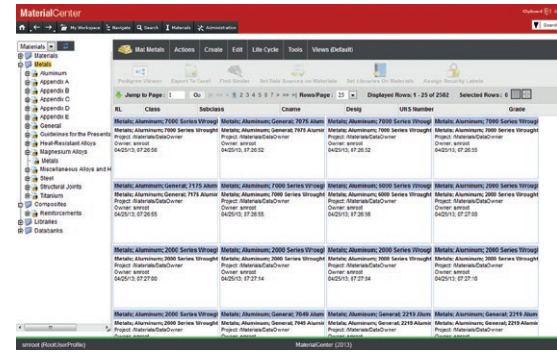
Drive engineering innovation through materials advantage

- Dashboards enable quick evaluation of materials data management projects and management oversight.
- Work request and approval workflow keep projects on track.
- All materials-related processes, input and output are documented via Audit Trail.
- Process-oriented, automation approach to data management implemented to minimize manual data entry activities.
- Robust and intuitive interface for data search, retrieval and comparison for all data types – tabular, curves, images, etc.
- Web-based interface to data management processes enables distributed data authoring and maintenance.
- Built-in job queue interface optimizes execution of materials simulation processes.



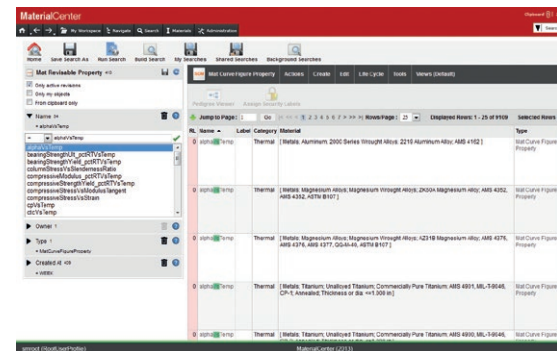
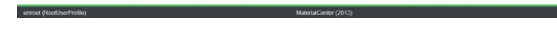
Integrated processes that ensure traceability of materials decisions throughout product lifecycle

- Deep integration with Excel, Digimat, and other 3rd party applications that support materials data processing.
- Bi-Directional REST API supports Integrated access to MaterialCenter from MSC applications, and other 3rd party applications.
- PDM integration using PROSTEP OpenPDM technology.
- Leverages existing hardware and software infrastructure.
- Auto-capture of all data transactions ensures easy resolution of materials-related liability issues and material substitution decisions.
- Bi-directional integration ensures that both data transmission and capture are archived and are usable and available for comparison and validation.
- Proven rapid deployment methodology ensures immediate productivity gains.
- Support for the common material data exchange format (MatML) from the National Institute of Standards and Technology.



Proven scalability to meet the demands of Integrated computational methods engineering (ICME)

- Built on a framework adopted by industry leaders in automotive, aerospace, consumer goods, electronics, shipbuilding and other industries.
- Proven performance scalability supporting thousands of users globally.
- Configurable to support multiple global locations.
- Web-based configuration enables fast deployment and minimizes IT support.



Senvol Database™ Databank

The Senvol Database™ is the first and most comprehensive database of industrial additive manufacturing (AM) machines and materials. The database contains data on over 1,000 AM machines and over 3,000 compatible AM materials. Included AM materials span polymers, metals, composites, ceramics, sand, and wax.

<p>AM machine data includes information on:</p> <ul style="list-style-type: none"> • Manufacturer • AM process • Build envelope size • Price range • Compatible materials 	<p>AM material data includes information on:</p> <ul style="list-style-type: none"> • Material type (including similar materials) • Material properties (including mechanical, thermal, and physical properties) • Results for different machine modes • Results for different post-processing conditions • Compatible machines
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Hexagon is a global leader in sensor, software and autonomous solutions. We are putting data to work to boost efficiency, productivity, and quality across industrial, manufacturing, infrastructure, safety, and mobility applications.

Our technologies are shaping urban and production ecosystems to become increasingly connected and autonomous – ensuring a scalable, sustainable future.

e-Xstream engineering, part of Hexagon’s Manufacturing Intelligence division, provides Integrated Computational Materials Engineering (ICME) solutions to innovate and optimise product performance using the right materials and manufacturing process for the right application. Learn more at e-Xstream.com. Hexagon’s Manufacturing Intelligence division provides solutions that utilise data from design and engineering, production and metrology to make manufacturing smarter.

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