GRANTA MI PACKAGE

GRANTA MI:Product Engineering Package

The GRANTA MI:Product Engineering™ Package integrates a single, centrally managed and approved source of materials data into the product design and development process.

Materials are referenced throughout the product lifecycle, e.g., within CAD, PLM, and CAE tools. These references can come from many different sources, risking inconsistencies and making change control difficult. With GRANTA MI™, you ensure consistency and control. From initial assignment, using our apps within CAD or PLM, to choosing full material models for CAE tools, you access the right data, fast, and can be confident that it is fully traceable to its source.

The problem

- Without a controlled list of materials available in CAD, weight rollup is either not possible or unreliable. This can cause delays later on in development.
- Designers often assign incorrect or inappropriate specifications. Time-consuming manual processes are required to correct the Bill of Materials.
- CAD libraries don't always contain the right data for early stage simulation, causing delays or use of unvalidated data to fill gaps.
- Different material datasets are available within CAD and PLM, leading to mismatches and requiring extra release processes to validate the data.
- The PLM system does not represent materials effectively, limiting use of materials information across the product portfolio.
- CAD and CAE users work from different material datasets, making CAD-to-CAE transfer of geometry and materials error-prone.

Key benefits

- Create a single, consistent source for corporate materials data
- Save time and avoid error with fast, easy access in CAD, CAE, or PLM
- Get the right data on assignment, e.g., to enable simulations or generate drawings
- Analyze where materials are used in products to prioritize work and support impact analyses
- Make it easy to update materials, with common assignment and reporting across CAD and PLM
- Avoid delays and inconsistencies by linking the material datasets used in CAD and CAE

Case studies

General Motors are saving time and ensuring consistency. **Molex** are reducing cost and increasing efficiency. **Lockheed Martin** are implementing a preferred materials strategy.

These and other case studies at: *www.grantadesign.com/casestudies*

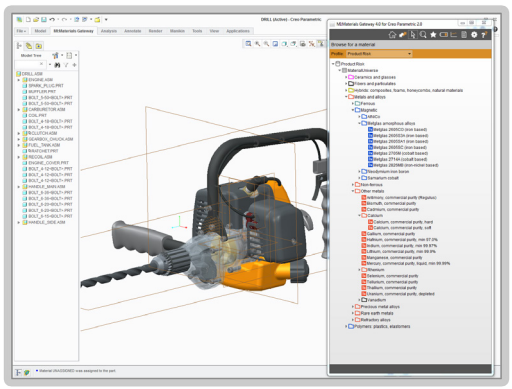
The MI:Product Engineering solution

Based on industry-standard materials information management

GRANTA MI is the leading system for materials information management in engineering enterprises, used by top manufacturing organizations to create a single source for all corporate materials knowledge. It manages the full lifecycle for complex materials test data, supports analysis to derive accurate design data, and integrates specifications, regulatory and environmental information, high quality reference data on material properties, and much more. Subsets of this data, for example, preferred material lists, can be made available in a controlled manner to designers—always retaining full traceability to the original source of the data.

Fast, consistent, effective assignment in CAD

MI:Materials Gateway™ apps enable instant access to approved materials data from within leading CAD software. Connect direct to your corporate GRANTA MI database. Search and browse the available materials and assign them to your model, dramatically cutting the time taken searching for information. Now you can be sure that a consistent density is used everywhere in the organization, enabling reliable weight roll-ups. Relevant data can be transferred along with the material assignment to ensure, for example, that the right material specifications and IDs are written onto drawings, or that data required for early-stage simulation is available.



Assigning materials in Creo® CAD.

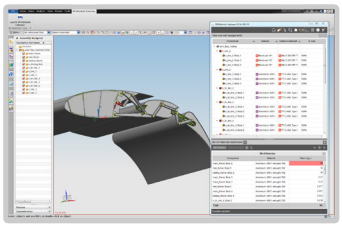
Consistency across CAD and PLM

Materials assignments can also be made within PLM. Where you have CAD and PLM working together, assignments can be synchronized between these environments, and reports can be run in either CAD or PLM. So it becomes easy to review and update materials beyond initial CAD development. Material items are created when data is transferred to PLM, enabling "where used?" queries to be run across the product portfolio.

Bridging the gap between design and simulation

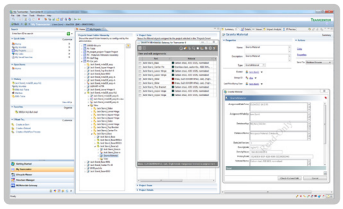
MI:Materials Gateway enables you to link material and model assignments in CAD and CAE. Bill of Materials transfer technology in MI:Materials Gateway enables materials assignments made in CAD to be quickly re-applied in CAE. Because you are assigning from the same database, choosing a particular material in CAD ensures that the right CAE models are presented for the user to choose from in CAE. These tools can greatly de-risk the geometry transfer process and avoid the need for time-consuming fixes when inconsistent data is used.

MI:Materials Gateway



Mass roll-up in NX® CAD.

GRANTA MI:Materials Gateways enable you to access corporate materials information directly within CAD, CAE, or PLM software. Open the app, find the right material, and assign it. Data can then be applied within the host system. GRANTA MI provides a materials connection across these environments: of particular use where you use software from different vendors.



Analytics in Windchill® PLM.

What do you buy?

Core GRANTA MI database system and admin tools

MI:Materials Gateways
CAD: Autodesk Inventor®, CATIA®, Creo®, Inventor®, NX®
CAE: Abaqus/CAE®, ANSYS Workbench®, HyperMesh®, NX®
PLM: Teamcenter®, Windchill®

Reference data:
Your choice from the Granta data library. E.g., MMPDS aero alloys or CAMPUS® plastics

Services:
Getting Started Services

GRANTA MATERIAL INTELLIGENCE

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ENG-16-1