Ansys 2023 R1

Take A Leap Of Certainty

Release 2023 R1 Highlights
Ansys Materials

Ansys Granta MI, Selector, MDS, EduPack

Ansys

THE Authoritative Source of Truth for Materials

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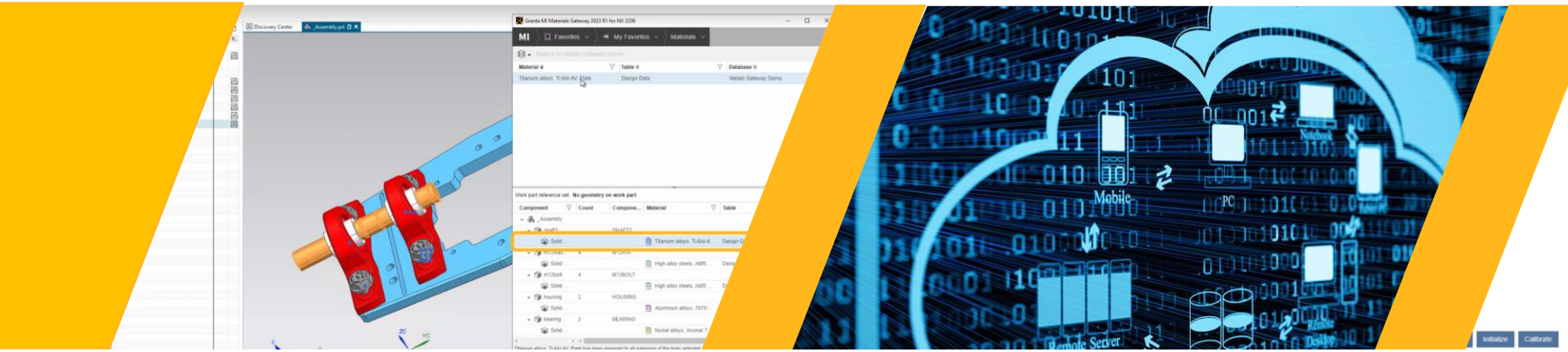
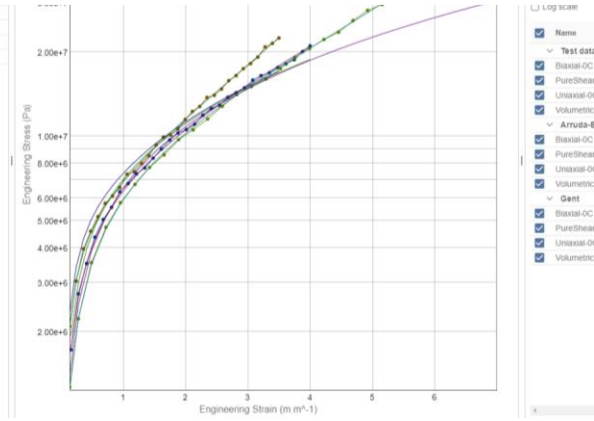




Enhanced UX for Authoritative Source of Truth for Materials

- ✓ Enhanced UX for Granta MI including new CAD Connectors.
- ✓ Experts can **configure, adapt and localize their authoritative source of truth** for materials.
- ✓ CAD Connectors **save time and guarantee traceability** for simulation analysts.
- ✓ Part of the **Ansys Connect** solution.
- ✓ The likes of **Ferrari** and **Baker Hughes** use Granta MI for **materials digital transformation**.

Proactive Sustainability: now on the Cloud!

- ✓ Granta Selector with **updated eco data + Eco Audit**, now available on **Ansys Gateway**.
- ✓ Any engineer in any industry can make earlier, more informed product sustainability decisions.
- ✓ **Granta Selector + Ansys Discovery** for an enhanced product design strategy.
- ✓ See how **Deko** have used Selector to actively **reduce product CO_2 footprint by 20%.**

Help Simulation Accuracy with Materials

- ✓ Material Calibration **'initialize' feature** easily generates accurate coefficients: now in **Granta MI Pro**.
- ✓ Enables expert to easily calibrate a wider range of complex models.
- ✓ 300+ new **PCB and EM absorbing materials** for sensor, radar and 5G in high-tech and automotive.

Designing for Proactive Sustainability

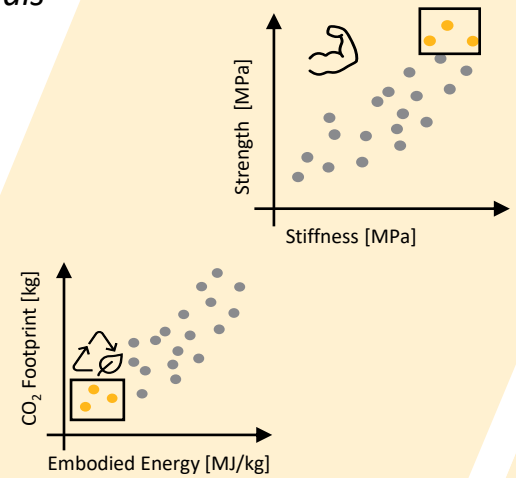
Objective

12 RESPONSIBLE CONSUMPTION AND PRODUCTION

UN Sustainable Development Goals

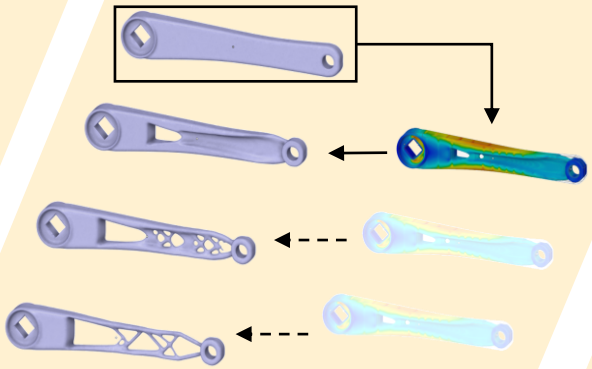
Materials Selection

Using: Granta Selector



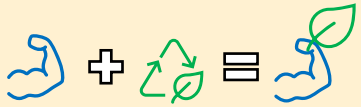
Validation & Design Optimization

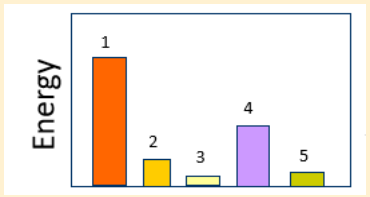
Using: Ansys Discovery



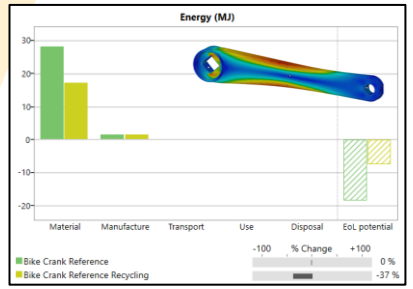
Concept Assessment

Using: Granta Selector Eco Audit





Optimal Design



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Product Release Detail

Ansys

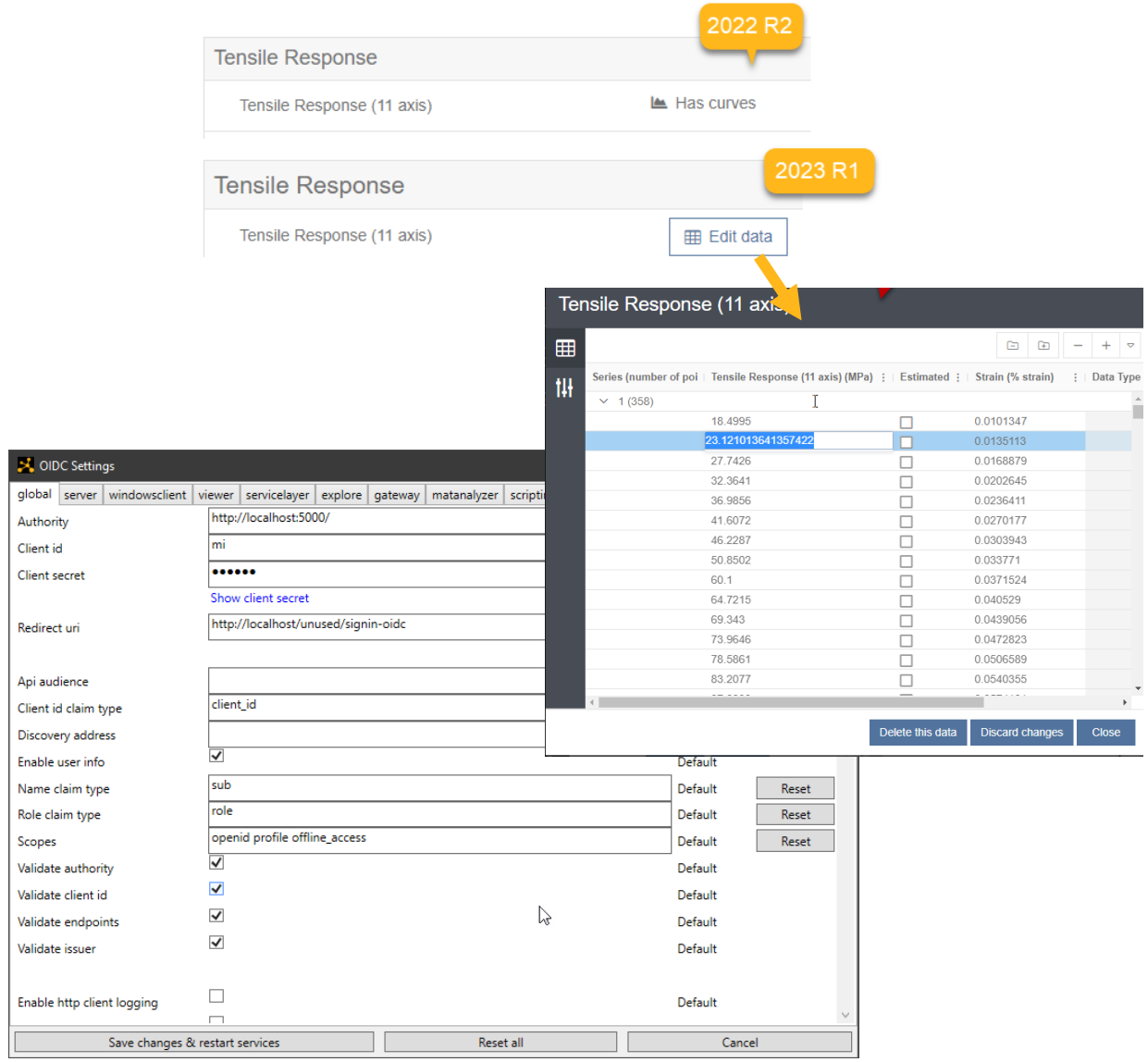
New in 2023 R1: Granta MI Core

What's New

- Enhanced UX with Explore app
  - Localization of display names for database schema items extended to Explore
  - New support for Version Control
  - New option to edit functional data
  - OneMI homepages for non-security groups (e.g. projects, teams)
- Deployment
  - New UI to simplify OIDC deployment
  - New support for Azure SQL Database for cloud deployments

Business & User Benefits

- Enable multi-lingual user bases to see database items in their native language
- Create customized homepages for target groups, projects
- Enable customers using version control to deploy Explore
- Enhanced user experience
- Simplified deployment for OIDC and SSO



What's New – Granta MI Integrations, Additive

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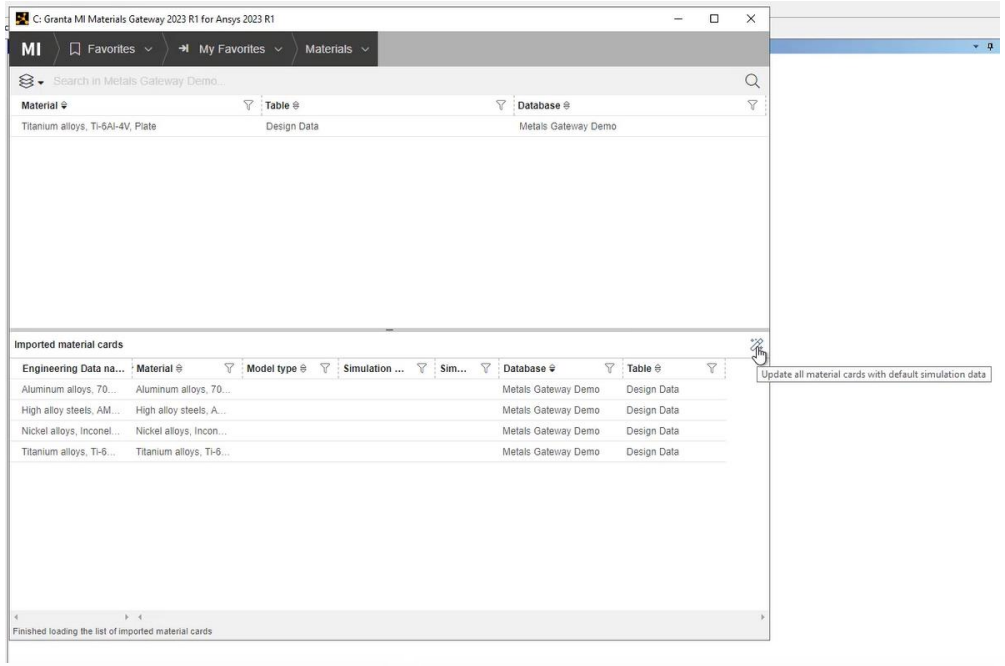
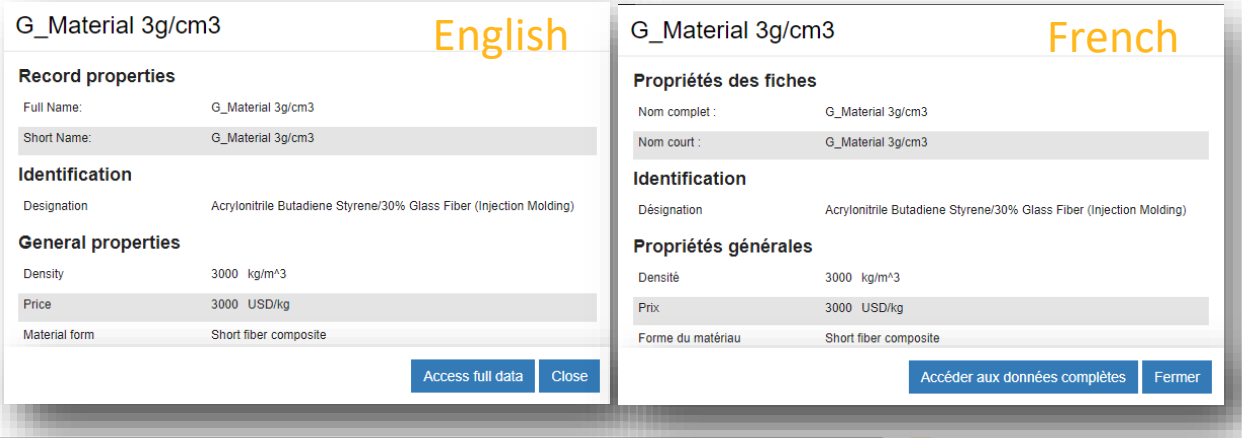
What's New

- Integrations
  - CAD Connector Siemens NX to Ansys Workbench support for design and simulation data in the same table or separate tables
  - PTC Creo Family Table support
  - Gateway profiles at host level
  - Enhanced localization: translate the schema items
  - New version support (NX 2206, Teamcenter 14, Creo 9, Windchill 12.1, ANSA 23, Workbench and Electronics Desktop 23 R1)
- Additive Manufacturing
  - AM importer for EOS machines





Business & User Benefits

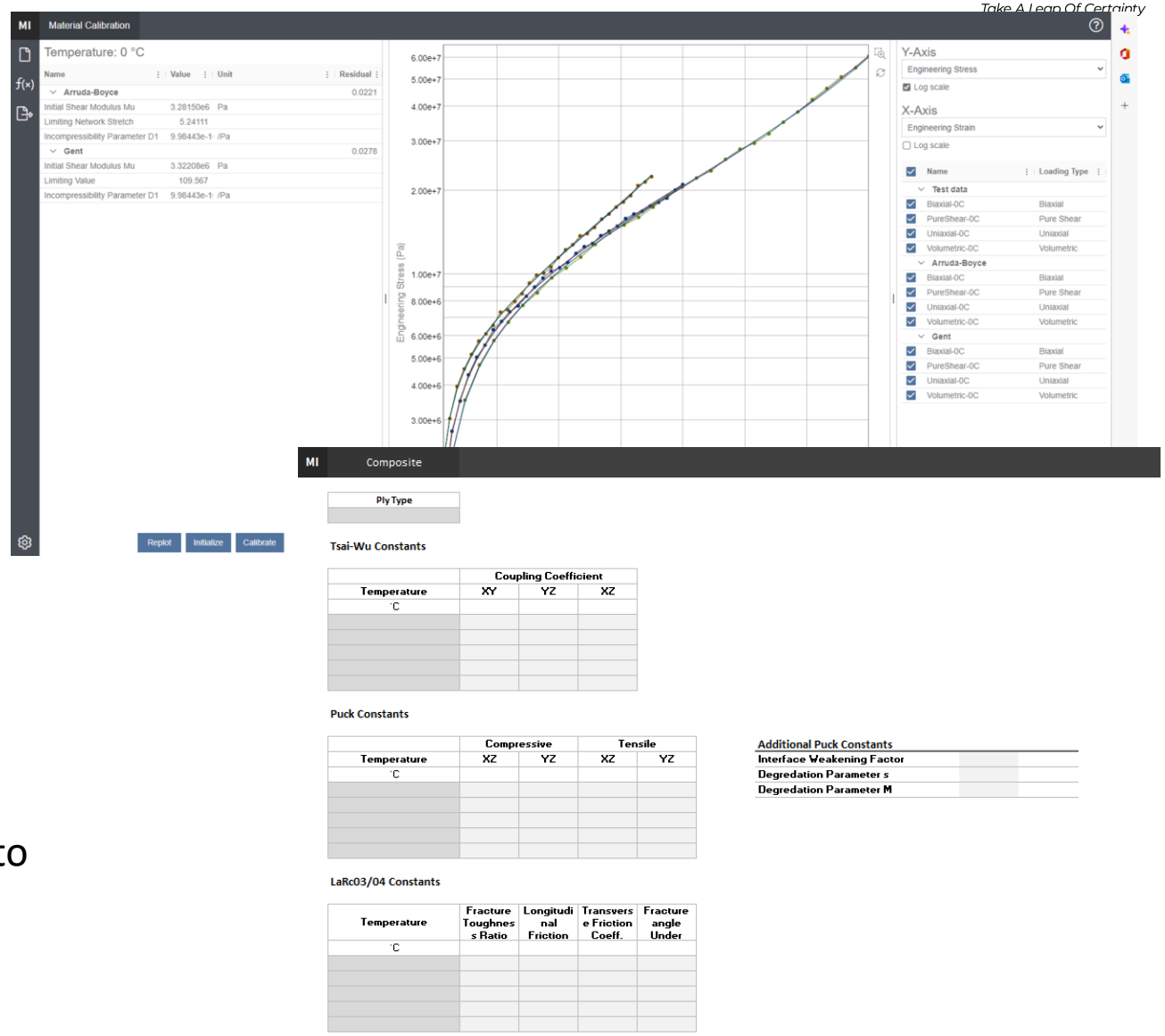
- Streamlined workflow for transferring materials assignments from NX to Workbench
- Enhanced user experience
- Integrate with latest versions of engineering tools
- Enabling customers to import EOS AM machines data into Granta MI

Granta MI Materials Gateway
NX to Ansys Workbench Connector

New in 2023R1 – Granta MI Pro

What's New

- Material Calibration App for complex Ansys Mechanical Materials Models (Hyperelasticity)
- New Electromagnetics Data Bundle
- Schema Updates to capture in-house materials data- Viscoelasticity, New Composite properties



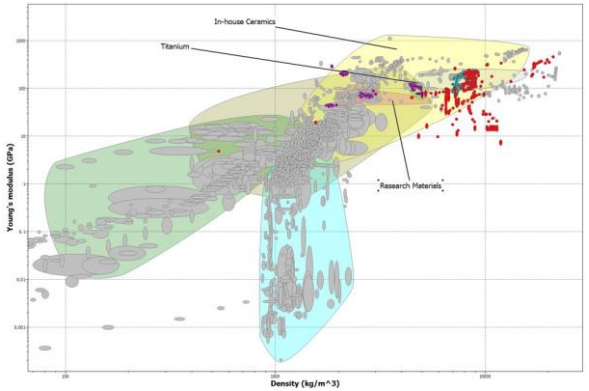
Business & User Benefits

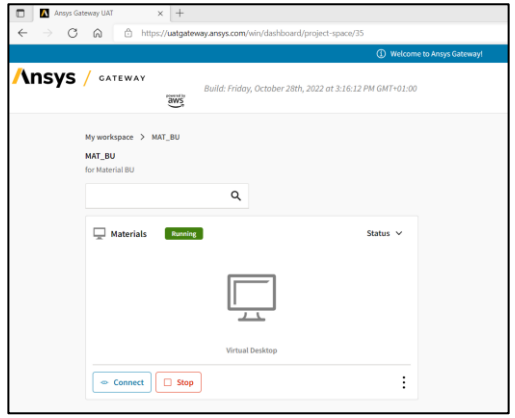
- Fast-Start for Materials Intelligence
- Easy-to-Use app for converting materials test data in to simulation ready material models
- High quality reference data for EM simulations

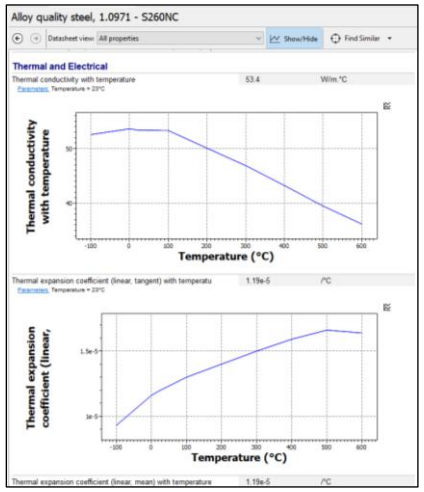
New in 2023 R1: Ansys Granta Selector

What's New

- Use in-house data or reference data in **Eco Audit** – materials, component manufacturing processes and entire-product processes
- Updated and more granular data for Transport methods.
- Latest data for region-specific environmental impact for product use
- Improved user experience and logic for custom material envelopes for all Selector tables in the Chart/Select stage
- Granta Selector is now available as part of **Ansys Gateway**
- All the latest material data - updates to core data and Ansys Granta Advanced Materials - **Polymers, Metals, Aero, Electromagnetics, Additive Manufacturing** and **Medical** data add-ons







User Benefits

- More powerful streamlined life cycle assessments – quickly explore 'what-ifs' and identify largest environmental impacts.
- Access Selector on the cloud – no local installation needed
- Illustrate material families and patterns easily
- Up to date comprehensive data library for material selection, environmental assessment, simulation and more; use in Selector or export to key Ansys and third party products.

:Untitled - Granta Selector 2023 R1 - [New Product A]

File Edit View Select Tools Window Help

Home | Browse | Search | Chart/Select | Solver | Eco Audit | Synthesizer | Tools | Settings | Help

Selection Project

1. Selection Data

Database: Polymers plus — Change...

Select from: MaterialUniverse: All materials

Reference: Not set — Set...

2. Selection Stages

Chart/Index | Limit | Tree

- Stage 1: CO2 footprint per unit of stiffness vs. Mass per unit of stiffnes
- Stage 2: Price

3. Results: 3974 of 4226 pass

Show: Pass all Stages

Rank by: Alphabetical

Name

2024, T3 aluminum/aramid fibe…
2024, T3 aluminum/aramid fibe…
7075, T761 aluminum/aramid fi…
7075, T761 aluminum/aramid fi…
ABS (10% carbon fiber, EMI s…
ABS (10% carbon fiber, EMI s…
ABS (10% stainless steel fiber)
ABS (15% carbon fiber, EMI s…
ABS (20% carbon fiber, EMI s…
ABS (20% carbon fiber, EMI s…
ABS (20% glass fiber, injection…
ABS (20% glass fiber, injection…
ABS (20% long glass fiber, inje…
ABS (30% carbon fiber, EMI s…
ABS (30% carbon fiber, EMI s…
ABS (30% glass fiber, injection…
ABS (40% aluminum flake)
ABS (40% carbon fiber, EMI s…
ABS (40% long glass fiber, inje…
ABS (6% stainless steel fiber)
ABS (7% stainless steel fiber)
ABS (extrusion)
ABS (flame retarded, molding …
ABS (heat resistant, injection …
ABS (high-impact, injection mol…
ABS (injection molding, platable)
ABS (medium-impact, injection …
ABS (rubber modified, injection…
ABS foam (structural, 0.85)
ABS+PA (unfilled)
ABS+PBT (10% glass fiber)
ABS+PBT (10% glass fiber, fla…
ABS+PBT (20% glass fiber)
ABS+PBT (30% glass fiber)
ABS+PBT (impact modified)
ABS+PBT (unfilled)
ABS+PC (flame retarded)
ABS+PC (injection molding and…
ABS+PVC (flame retarded)
Acrylic rubber (ACM, 30-40% …
Acrylic rubber (ACM, unreinfor…
Aerated concrete
AES (flame retarded)
AES (high-impact)
AES (unfilled)
Afromosia (l)
Afromosia (t)
Al(2009)-15%SiC(w) MMC pow…
Al(2009)-20%SiC(p) MMC pow…
Al(2024)-30%SiC(p) MMC pow…
Al(2124)-15%SiC(w) MMC pow…
Al(2124)-20%SiC(p) MMC pow…
Al(2618)-12%SiC(p) MMC pow…

4. Report

Comparison... | Selection...

Home | Stage 1 | New Product A

Eco Audit Project

Product definition | Report

New | Open | Save | Compare with...

Product information

Name: New Product A

Material, manufacture and end of life

How do I use my own materials or processes?

Components

Qty.	Component name	Material	Recycled content	Mass (kg)	Primary process	Secondary process	% removed	End of life	% recovered
50	Plastic Outer	ABS (extrusion)	10.0%	2	Polymer extrusion	Fine machining	5	Recycle	100

Joining and finishing

Name	Process	Amount	Unit

Transport

Use

Report

Summary chart | Detailed report

Image: Browse... Clear

Note:

Ready

NUM

New in 2023 R1: Ansys Granta Data

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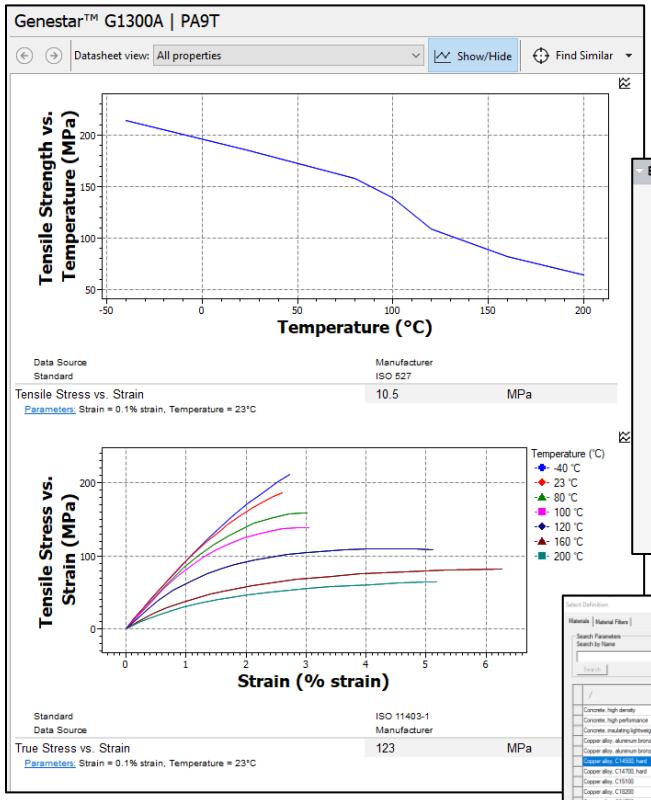
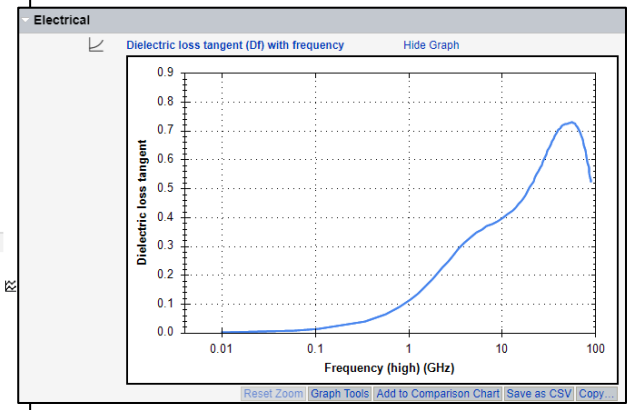
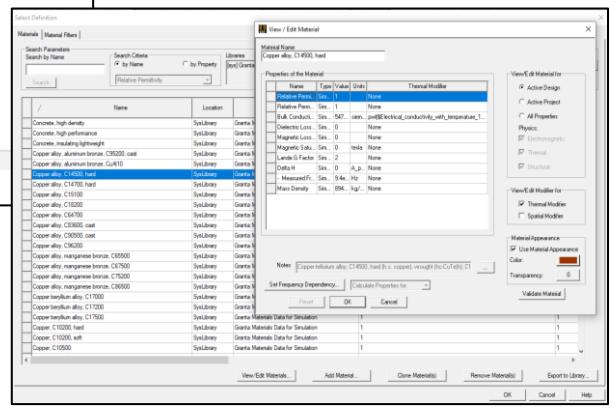
What's New

- **Core Data (MaterialUniverse™)** – new steels, new process records and latest price and risk index information
- **Polymers** – all the latest polymers and additives from UL Prospector, plus simulation-ready data from Sabic and Kuraray
- **Metals** – 3000+ updated records and 700+ new records. New mechanical, thermal and electrical curve data
- **Aero** – update to the latest version of MMPDS
- **Electromagnetics** – 320+ PCB material records, and new EM-absorbing materials
- **Additive Manufacturing** – 270+ new materials and 80+ new machines
- **Medical** – latest devices, producers, recalls and guidance documents.
- **MDS** – latest updates and new PCB material data







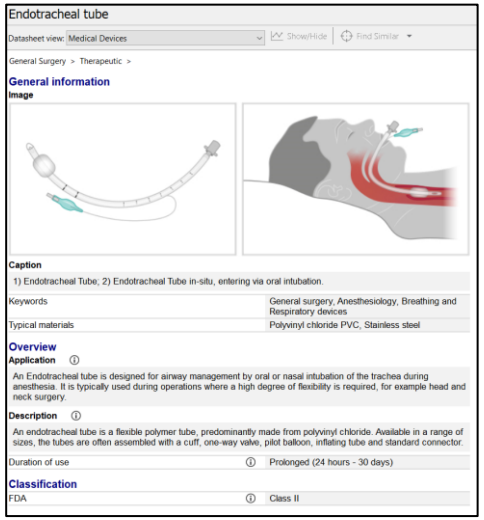
User Benefits

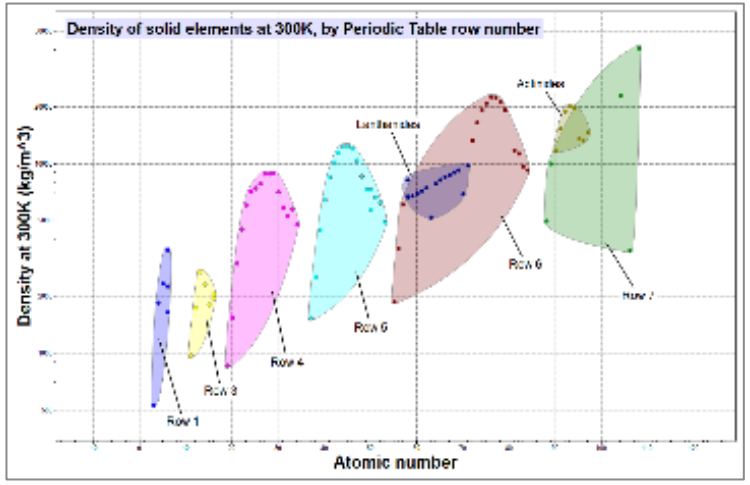
- All the latest data for simulation, material selection, environmental assessment and more
- Transfer key materials property data to Ansys and third-party solvers – physical, thermal, electromagnetic, mechanical, etc.

New in 2023 R1: Ansys Granta EduPack

What's New

- Enhancements to **Eco Audit** allowing users to use more of their own data in the Manufacturing stage, plus updates to Transport methods and Country-specific data.
- **Portuguese** translation of user interface and introductory databases
- Merge of **Bioengineering** and **Medical Devices** databases, allowing device design considerations to be seamlessly included in teaching
- Improved user experience and logic for custom material envelopes for all tables in the Chart/Select stage
- All the latest material data - updates to core data in all databases and industry data in the Advanced databases





User Benefits

- More versatile streamlined life cycle modelling
- Teach in Portuguese for intro level classes
- Teach biomedical device design and material selection together
- Illustrate material families and patterns easily
- Up to date comprehensive data library for material selection, environmental assessment, simulation and more; use in EduPack or export to key Ansys and third party products.


Ansys