ANSYS GRANTA MI 2020 R1.1

GRANTA MI Release Notes

ANSYS GRANTA

GRANTA MI™ is the leading system for materials information management in engineering organizations. It enables you to control, analyze, and securely share critical corporate data on materials and processes, managing the materials information lifecycle.

grantadesign.com

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Document version: MI2020R1/01
Last Revised: February 2020

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1 About this release

The GRANTA MI Version 2020 R1.1 release is a Service Pack release for Version 2020 R1, with a new version of MI:Server, and updated Version 6.3 MI:Materials Gateways for NX, ANSYS and ANSA.

Apart from a new version of MI:Server (20.1.5862.0) with the bug fix detailed below, this GRANTA MI release is functionally identical to the Version 2020 R1 base release (Version 20.1.5726.0), released January 2020, with no changes to any other components (MI:Viewer, MI:Explore etc).

This update release includes a bug fix for MI:Server that addresses a memory leak in Version 2020 R1 which could cause the server to run out of memory after a period of time.

This is an important update, and we recommend that all customers with Version 2020 R1 install this update to avoid potential memory issues with MI:Server. Customers using ANSYS License Manager are advised to install the Version 6.3 Gateways.

GRANTA MI™ Version 2020 R1 is the latest version of the leading materials information management software system for engineering enterprises. GRANTA MI meets the different and demanding needs of the materials experts, design teams, engineering analysts, environmental professionals, managers, data publishers, and other professionals who work with information related to metals, composites, ceramics, plastics, and other materials.

Granta is committed to maintaining GRANTA MI's leading position. Regular releases deliver major new features and performance improvements, guided by input from our customers, while keeping pace with changing systems requirements.

To install GRANTA MI, please follow the installation instructions available in your download.

If you have any problems, questions or feedback, please contact us at Granta:

Email:	support@grantadesign.com
Telephone:	USA or Canada: 800 241 1546 UK: 01223 518895 France: 08 00 76 12 90 Germany: 0800 182 5026 Elsewhere: +44 1223 518895
Web:	grantadesign.com

2 GRANTA MI System Overview

Core system

- **MI:Server**—the GRANTA MI application server.
- **Service Layer**—software component that provides an interface between MI:Server and client applications.
- **MI Search Server**—the GRANTA MI search component, based on Elasticsearch.

Apps

- **MI:Explore**—task-specific web apps that provide a highly-configurable and easy-to-use interface for searching and editing data stored in GRANTA MI.
- **MI:Viewer**—a rich web application that provides full browse, search, edit, and management capabilities for advanced property data stored in GRANTA MI.
- **MI:Remote Import** –web app for importing data from text files or Microsoft Excel® files.
- **MI:Toolbox**—client app that provides plug-ins for import, export, manipulation and bulk transformation of data.
- **MI:User Manager**—web app for managing GRANTA MI system users.
- **MI:Workflow**—app that supports management of the processes by which materials information is requested, collected, approved, and released.
- **MI:Mat Analyzer**—optional, MATLAB-based app for visualizing data relationships and performing statistical analysis.

Add-on software

- **MI:Materials Gateway**—a suite of modules enabling data and tools from GRANTA MI to be accessed within CAD, CAE, and PLM software. MI:Materials Gateway applications are now available for Abaqus/CAE®, ANSYS Workbench®, Autodesk Inventor®, CATIA®, Creo®, HyperMesh®, NX®, Teamcenter®, and Windchill®.
- **MI:BoM Analyzer**—enables you to import and edit Bills of Materials ('BoMs') for products or product designs, or build new BoMs from scratch, then run reports that assess product risk and support better-informed design decisions.
- **MI:Reports**—reports and dashboards covering restricted substances, environmental impact, critical materials, and more.
- **MI:Scripting Toolkit**—a set of scripts in MATLAB or Python that enable you to manipulate GRANTA MI data.
- **MI:Enterprise Connect**—support for server-level integration of GRANTA MI with PLM systems, initially Teamcenter.

Comprehensive descriptions of these tools and the combined capabilities of the resulting materials information management system are available in the accompanying documentation.

GRANTA MI Data Management Templates

Templates are available to help you configure the system for applications including test data management, additive manufacturing, and composites.

- **MI:Metals Template**—a template database schema and homepage for managing metals data, with supporting import, export and analysis tools.
- **MI:Composites Template**—a template database schema and homepage for composites, with supporting import, export and analysis tools.
- **MI:Additive Manufacturing Template**—a template database schema for storing and managing the materials and process data related to Additive Manufacturing.

3 GRANTA MI 2020 R1 release overview

3.1 New licensing model now available

A new licensing model is introduced with GRANTA MI 2020 R1 to provide enterprise customers with a more effective means of managing their usage of GRANTA MI software licenses throughout their organizations.

License entitlement for GRANTA MI customers with an appropriate license agreement can now be managed using **ANSYS License Manager**, which provides license checkout and check-in capabilities across all ANSYS products.

The new licensing model is now the default for all new GRANTA MI customers. However, the traditional licensing model will continue to work with all GRANTA MI versions, and existing customers can upgrade to GRANTA MI 2020 (Legacy) with no change in license using their existing 16-digit license key.

3.2 New features and enhancements

- Search enhancements, including new support for synonyms and search suggestions; see *4.1*
- New database schema copy/sync support; see *4.2*
- User interface refresh for a more consistent user experience across Granta web apps; see *4.3*
- An extensive user interface refresh and lots of usability improvements for MI:Explore; see *4.4*
- A new look and format for online help; see *4.5*

3.3 Data modules

Version 2020 R1-compatible versions of all Granta reference data modules are now available.

The following new or updated data modules are also now available:

- Global Metals Specifications—**new in December 2019**
- ASM Medical Materials
- JAHM Curve Data
- MaterialUniverse
- M-Base Plastics—previously called *CAMPUS & M-Base Plastics*
- MMPDS-13 (released October)
- Prospector Plastics
- Senvol Database™

See Section *5, New and updated data modules* for a summary of changes in these data modules; if you have older versions of any of these databases installed, and you have not added data that you want to keep, you should consider replacing them with the latest version along with the new GRANTA MI software.

Find out more about GRANTA MI data products here: grantadesign.com/industry/products/data/

3.4 Released concurrently with GRANTA MI 2020 R1

- A new version of **MI:Mat Analyzer**, Version 1.3; see *4.6* for a brief summary. This product is installed separately on client computers and comes with its own Release Notes and Installation Guide.
- A new version of the *MI:Training* database, updated to demonstrate some of the new data formatting capabilities introduced in MI:Explore in this release; see *4.7*.

4 What's new in GRANTA MI?

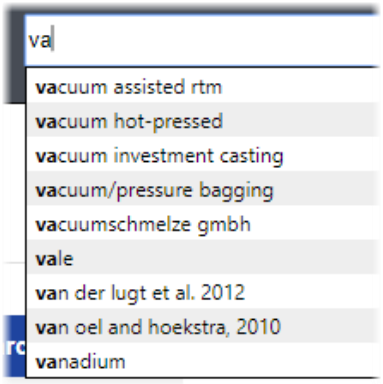
This section details new features, significant improvements, and important changes delivered in this release.

4.1 Search experience improvements

Improvements in this release provide an even more intuitive search experience for application users, and a troubleshooting tool to help MI Admins resolve indexing problems more easily.

Search suggestions (autocomplete)

MI:Viewer users are now able to see search suggestions as they type, for example:



Note that some post-install configuration is required to enable this feature: see the *GRANTA MI Configuration Guide* for information.

Search synonyms

The scope of searches is now broadened to include keywords or phrases with the same or similar meaning, or with alternative spellings. For example:

- ***mold*** finds records with ***mould***
- ***mould*** finds records with ***mold***

Stemming applies on top of synonyms, so ***mold*** finds ***moulded***.

Search synonyms are defined globally and apply across all databases and Granta applications; see the *GRANTA MI Configuration Guide* for information on managing search synonyms.

Easier troubleshooting of indexing issues

A new **View Search Index Errors** option is available in MI:Server Manager and MI:Viewer to help Admins identify which files are causing 'index out of sync' errors, and to allow individual files to be excluded from indexing.

Updated Elasticsearch software

MI Search Server has been updated to use the current major version of Elasticsearch (7.3.1).

4.2 Database schema copy/sync

The Data Updater tool in MI:Admin now includes support for copying, or cloning, content from one GRANTA MI database to another MI database on the same MI server, or on a MI different server. This content may include the database records (data), the database structure (schema), or both.

Previously, the Data Updater was used primarily to apply data and schema updates to the Granta Restricted Substances database, for which regular updates were published by Granta, allowing customers to keep their database up to date with all the latest substance and legislation changes.

New **Create update** functionality in GRANTA MI 2020 R1 allows anyone to create updates for any GRANTA MI database and apply them to another database. For example, you can now:

- Easily create an exact copy of a production database for development, testing, or diagnostics, all without disrupting the operation of the production database.
- Make a copy of a database with just the schema information and no data, for example, to share schema design between teams, or to create an empty, new database.
- Copy specific tables or data from one database to another.
- Harmonize data between different copies of a database.

Data Updater works by exporting content from one MI database as an XML 'Update file' which is then imported into ("Applied to") another MI database. Data Updater can add, modify, and delete items in the destination database, while maintaining any non-conflicting changes.

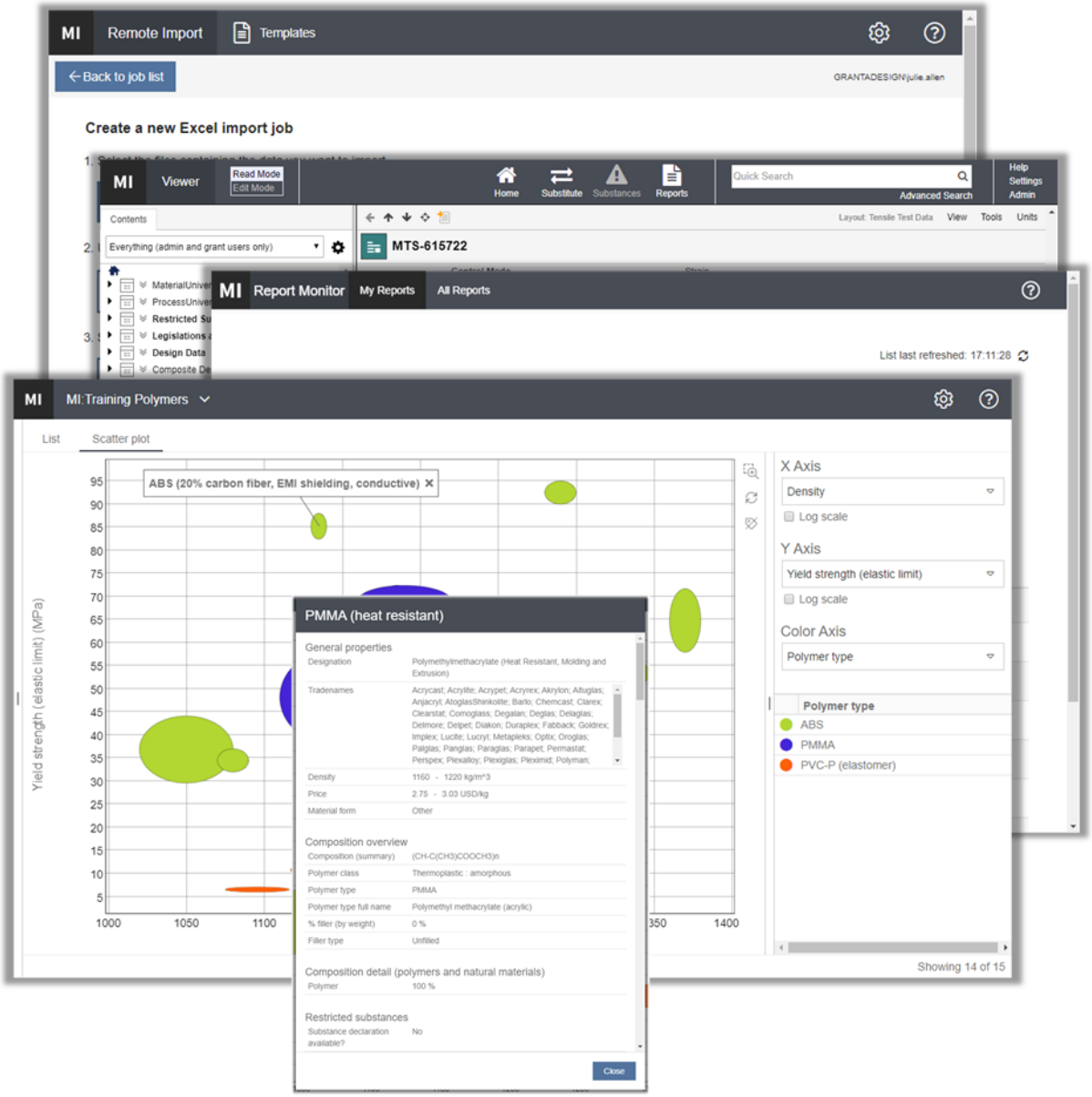
Data Updater is designed with data conflicts in mind, with detailed information provided before and after applying updates to ensure that possible data conflicts are detected and resolved.

To support workflows based around keeping content in a target database in sync with a source database over the course of repeated updates, Data Updater can keep track of the items that have already been sent to allow *incremental updates* to be produced, each containing information only on what has been added, changed, and deleted since the last Update was sent.

See the Data Updater help topics in the MI:Admin help for more information about creating and applying updates.

4.3 More consistent look across applications

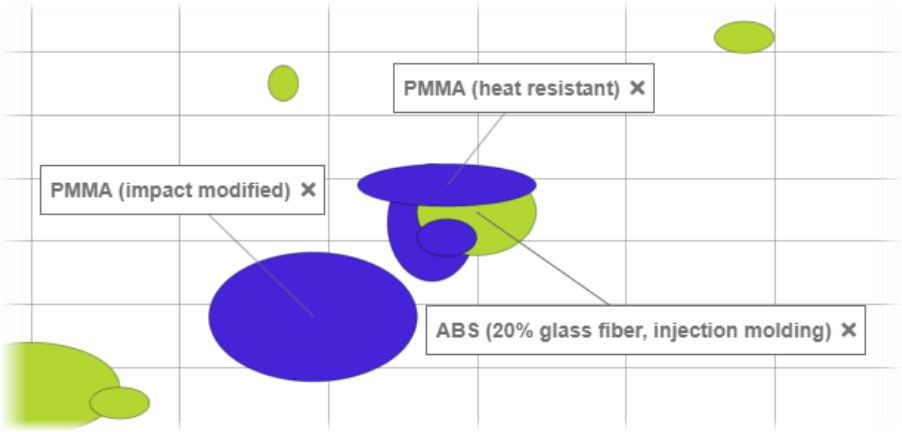
A visual refresh across the suite of GRANTA MI web applications will give users a more consistent experience and help them to feel at home, especially when switching between different apps:



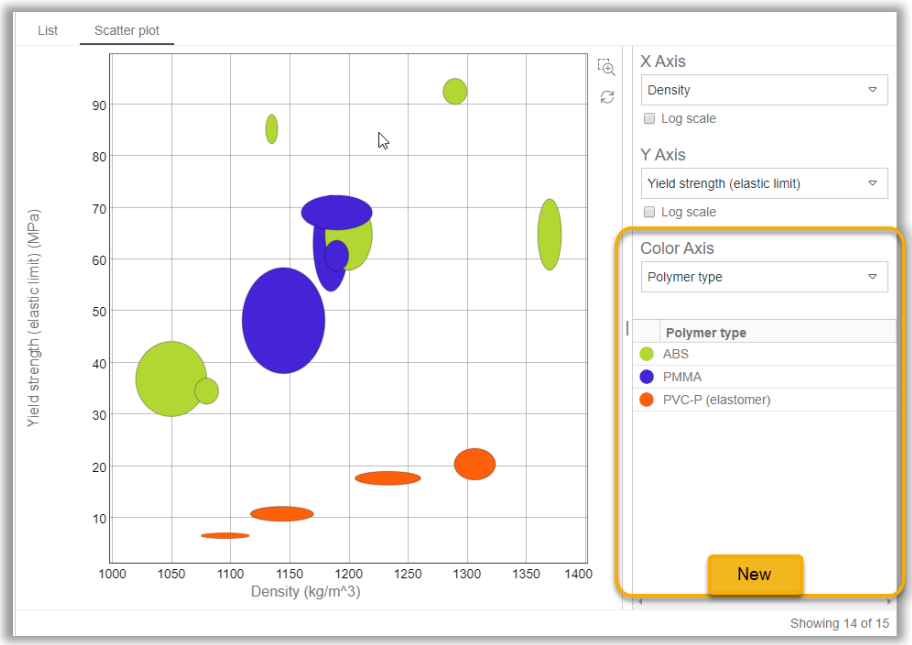
MI:Explore has had an extensive UI refresh, with a cleaner, more compact look and numerous usability improvements in response to customer feedback; see Section *4.4, MI:Explore feature updates*.

4.4 MI:Explore feature updates

- An extensive user interface refresh for the MI:Explore application brings a cleaner, more compact look, with one, simple grey theme (deep grey toolbar with light grey accent color), and new app icons.
- We added the ability to easily zoom in and out of, and add data labels to scatter plots and charts:

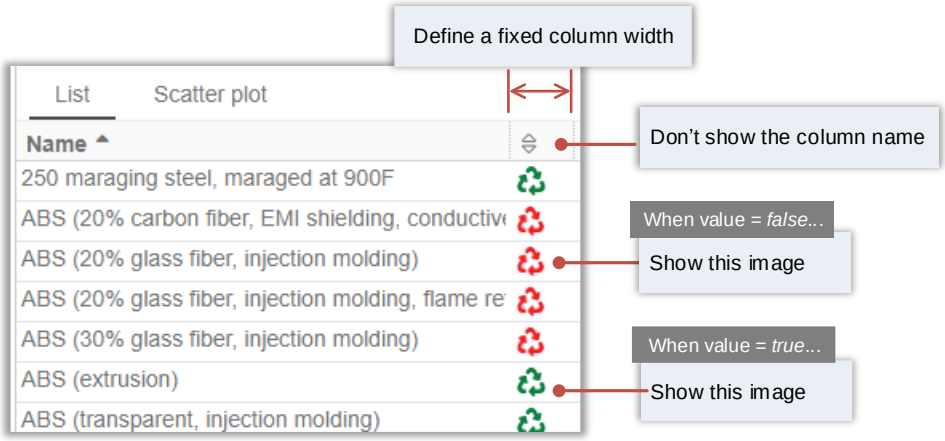


- A new “Color axis” option allows users to choose an Attribute to add an additional color dimension to bubble charts:

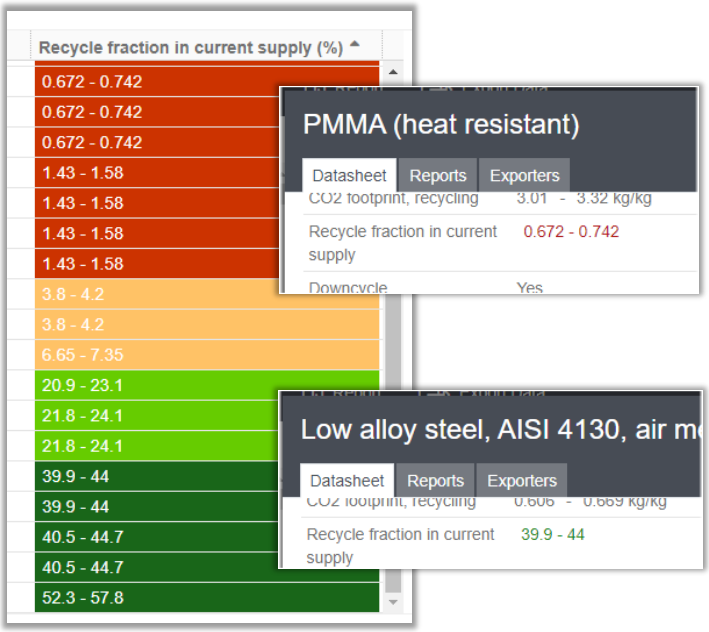


- The Search panel and the plot axis properties panel can now be expanded or collapsed with a single click; users can more easily add record Collections to scatter plots and charts.
- Users with sufficient privileges can now delete records in MI:Explore, as well as add and edit them.

- New configuration options allow Admins to provide an even more tailored user experience for application users:
  - Attribute values can be mapped to colors for use on a third "color axis" in scatter plots (see example above).
  - In the List view, the columns that users will see by default on opening a data view, the order in which the columns appear, and the column width and text alignment can all now be pre-defined in the data view config.
  - In the List view and in datasheets, images can be displayed instead of specific values where a simple icon may be quicker to discern in a list of search results than the text value *yes*, *on*, *true*. For example:



  - In the List view and in datasheets, it is now also possible to specify the text color and/or background color for specific Attributes and/or for specific Attribute values or value ranges. For example:

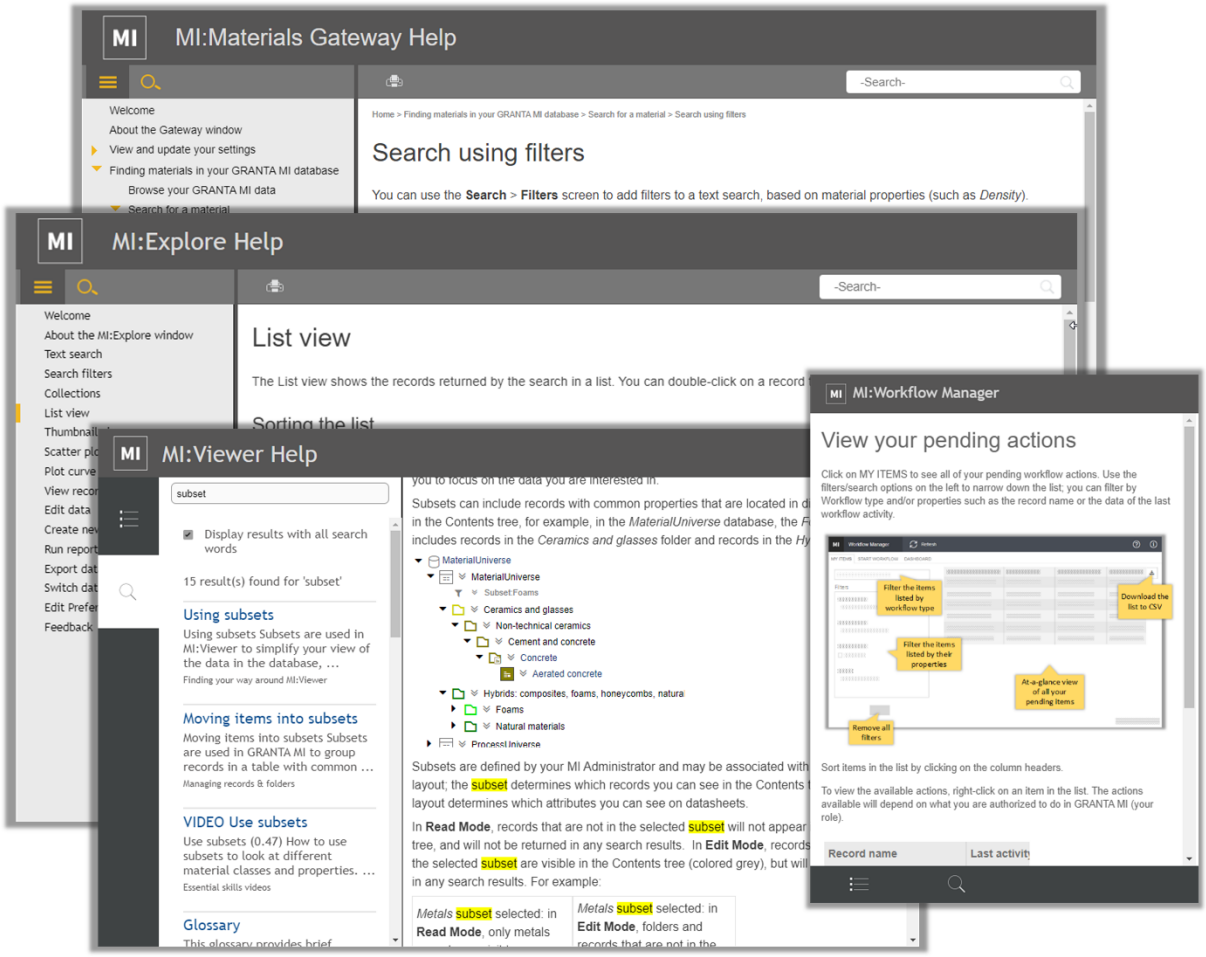


The *MI:Explore Configuration Guide* covers the required configuration to enable this new data formatting capability in MI:Explore.

4.5 Online help UI update

Alongside the new-look web application UIs, we have given the online help for many of our applications a refresh to make them more consistent, and to match the industry standard.

Online help is built using new **Responsive HTML 5**, which provides a reading experience optimized for different types of devices (smart phones, tablets, desktop) and which also has an advanced search capability, including search suggestions and search result ranking.



4.6 MI:Mat Analyzer Version 1.3

MI:Mat Analyzer Version 1.3 is released at the same time as GRANTA MI 2020 R1 and includes new support for adding specification limits to plots, easier cross-table comparisons, using color to represent numerical data on a logarithmic scale, and a number of UI usability improvements.

See the *MI:Mat Analyzer Version 1.3 Release Notes* for further details.

4.7 New version of the MI:Training database

MI:Training is a lightweight, tutorial database that contains a small selection of Granta data, suitable for use in training classes and for users who wish to familiarize themselves with GRANTA MI. The latest release of the MI:Training database includes:

- Enhanced MI:Explore configurations and layouts to demonstrate new features of MI:Explore, including default columns in the record list and a color axis on scatter plots.
- New example files to support classroom-based training on MI:Scripting Toolkit version 2.0 for Python and configuring new features of MI:Explore.

See the *MI:Training Database for GRANTA MI Release Notes* for further details.

5 New and updated data modules

Table 1 lists Granta data modules which are new, or which have been enhanced with revised content since the last major version of GRANTA MI was released. If you have older versions of any of these databases installed, and you have not added data that you want to keep, you should consider replacing them with the latest version.

Table 1 New and updated data modules

Data module	Released	Changes
ASM Medical Materials	Dec 2019	Updated with the latest FDA-approved devices (510(k) and PMA); extended to cover devices from 1976 onwards.
Global Metals Specifications	Dec 2019	This new data module includes and updates the **ASM Alloy Finder**, and the **MI-21**, **StahlDat SX**, and **SteelSpec** data modules. If you have any of these older databases and would like to upgrade, please contact your account manager.
JAHM Curve Data	Dec 2019	Over 500 new records, mainly metals & alloys, polymers
Material Universe	Dec 2019	Annual update with a new *Materials Data for Simulation* attribute; non-linear properties added to ANSYS Workbench exporters; 85 new materials added to provide improved selection in multiple applications and industries.
M-Base Plastics (formerly *CAMPUS & M-Base Plastics*)	Dec 2019	Due to a change in the license agreement between ANSYS Granta and the data provider, the name of this data module has been changed from **CAMPUS & M-Base Plastics** to **M-Base Plastics**. The data module contains the same dataset as in previous releases, and schema changes that allow data from the M-Base and CAMPUS data sources to be searched and directly compared for the first time. Also in this release: over 30 new manufacturers, and over 7,000 new materials; updates reflecting changing manufacturers and discontinued grades. This data module replaces the **CAMPUS Plastics** data module.
MMPDS-13	Oct 2019	Over 30 new records (e.g. 7099 Aluminum alloy); annual updates, including thermal data, strength and moduli.

Data module	Released	Changes
Product Risk 9.4	Oct 2019	Quarterly update to Restricted Substances and Coatings data; annual update to MaterialUniverse, Eco, and Critical & Conflict Materials data; updates to the home page; schema changes.
Prospector Plastics	Dec 2019	Over 2,000 new plastics records; improved searchability of certain properties, notably overmolding, coefficient of friction and wear factor; improved display of flexural and shear DMA graphical data.
Senvol Database™	Dec 2019	Over 600 new additive manufacturing materials and over 200 new additive manufacturing machines.

Note that version 2020 R1-compatible versions of all other Granta reference databases are also available, but these do not include any new data updates at this time.

Release notes for data modules can be downloaded from the GRANTA MI Support site: log in in with your My Granta credentials, click on **Get documentation**, and then choose **Data Modules for GRANTA MI**.

6 New and updated features delivered in GRANTA MI v12 updates

In addition to changes and enhancements in GRANTA MI 2020 R1, this release rolls up some new features delivered in the interim Version 12 Updates delivered over the past 12 months. For more detailed information on these items, refer to the Release Note for these updates.

GRANTA MI Version 12 Update 4 (September 2019)

- Easier installation/setup for GRANTA MI search, with an OpenJDK JRE now automatically installed with the MI Search Server component.
- Over 100 bug fixes and minor usability enhancements

GRANTA MI Version 12 Update 3 (June 2019)

- Improved support for searches that include wildcard and/or punctuation characters
- Improved handling of indexing problems
- Search index creation performance tuning
- Improvements to the display of complex tabular data in MI:Viewer datasheets
- Over 125 bug fixes and minor usability enhancements

GRANTA MI Version 12 Update 2 (April 2019)

- Improved handling of indexing issues on database load
- New search configuration options
- New clipboard paste format when copying records to/from the Record List in MI:Viewer
- Over 50 bug fixes and minor usability enhancements

GRANTA MI Version 12 Update 1 (February 2019)

Apart from a new version of MI:Explore that fixed a critical issue in MI:Explore version 5, this GRANTA MI update was functionally identical to the Version 12 base release (Version 12.0, released December 2018).

7 Top issues fixed in this release

This release includes a number of bug fixes and minor usability improvements; notable, user-facing changes are summarized below, grouped by the affected functionality.

As well as the issues listed below, this release rolls up bug fixes and enhancements that have been made incrementally in all of the GRANTA MI Version 12 update releases to date; you can read more about those changes in the Release Notes for each update.

Component	Description
Installation	Upgraded the version of Elasticsearch included in GRANTA MI to version 7.3.1.
Installation	Improvements to make component names and version numbers more consistent in the Installation Manager and in the individual component setup wizards.
MI:Admin	Fixed a bug that resulted in an error if a file was copied and then pasted back into the same folder on the Files page.
MI:Admin	Fixed a bug that could cause MI:Admin to unexpectedly shut down when working with large Home Page files, especially video files.
MI:Admin	In the Edit Attribute page of the Schema tool, clearer feedback is now provided when the 'Allow multiple values' option cannot be selected.
MI:Admin	Excel Template Definitions can now specify formatting rules for Record short names as well as Record names.
MI:Explore	Fixed an issue where the sort order was lost after editing a datasheet.
MI:Explore	The Collections and Curves panels are now both visible at the same time, and so you can plot Curves from the records in a Collection.
MI:Explore	Sorting search results by record name now works in the same way as sorting by other columns, that is, the results are initially sorted in ascending order.
MI:Explore	Ranges that span zero will now appear in the sorted list in a sensible place, rather than mixed in with results that do not have data.
MI:Explore	Users can now show and hide the Search and Curves panels with a single click.
MI:Explore	The user interface no longer provides a choice of themes.
MI:Explore	Replacement strings included in the Address field of Hyperlink Attributes can now be edited in MI:Explore.

Component	Description
MI:Server	Fixed a bug that caused unnecessary indexing errors to be written to the MI:Server log file during database load.
MI:Server	Better handling of indexing issues means that fewer 'Index out of sync' errors should occur.
MI:Server	When searching for embedded files by filename, it is no longer necessary to specify the file extension. For example, a search for 'testdata' will now return records containing files named testdata.xslx or testdata.csv, testdata.docx, etc.
MI:Server	The scope of searches can now be broadened to include keywords with the same or similar meaning via a search synonym configuration file in the MI:Server bin/config folder. Synonyms can be added manually or imported from a CSV-formatted file. See the 'Search and indexing configuration' section of GRANTA MI Configuration Guide for full details.
MI:Toolbox	Importing gridded functional data into version-controlled records produced a Cannot retrieve a value for not applicable data error when existing data was flagged as 'not applicable'. This is now fixed.
MI:Toolbox	The Excel Importer no longer treats Meta-Attribute names as case sensitive.
MI:Toolbox	In the Statistical Calculation plug-in, improved the way range data is handled where either the high or the low values are unset.
MI:Toolbox	Fixed a bug in the Excel Template Generator where the values in data validation lists for non-numeric data were incorrectly formatted.
MI:Toolbox	Identified and fixed performance issues in the Excel Importer, resulting in improved network usage and faster imports, especially when importing many Attributes.
MI:Viewer	Improved feedback when search problems are caused by issues with Elasticsearch (e.g. the service is not running).
MI:Viewer	Fixed a bug in Comparison Table Excel Reports where statistical summary data was in the wrong columns when record properties were included in the report.
MI:Viewer	Fixed a bug where the wrong version of a record could be shown in the Contents tree when switching between Read and Edit modes in version-controlled tables.
MI:Viewer	in Comparison Table Reports, fixed a layout issue with the exclamation points used to indicate that Access Control messages apply to the data.

Component	Description
MI:Viewer	Fixed a bug where searching on record date properties (Created, Modified) gave different results depending on the MI:Viewer application Language setting.
MI:Viewer	The default sort behaviour for Range attributes is now to use the Arithmetic and not the Geometric mean, so that ranges that span zero will now appear in the sorted list in a sensible place, rather than mixed in with results that do not have data. This will affect sorting search results by a Range attribute, sorting by a Range attribute column in the Pass/Fail table, and sorting by a Range or Float Functional attribute column in a Comparison Table Report.
MI:Viewer	To support the latest best practices for security and privacy, all cookies set by MI:Viewer now have the SameSite attribute set.
MI:Viewer	The IIS AppPool will now automatically be restarted after any changes are made to the application connection settings in the MI:Viewer Configuration tool.
MI:Viewer	Entering an invalid URL in the 'MI:Server URL' field in the MI:Viewer Configuration tool no longer causes an unhandled exception error.
MI:Viewer	Fixed an UI layout issue in the Select Report Content window where the info icon next to the attribute name field was misaligned.
MI:Viewer	Fixed a bug where autocomplete suggestions were not provided on the Advanced Search page if the selected Profile contained any blank databases.
MI:Viewer	When using the View > Printable Report option to print a Comparison Table report that contains access-controlled data, access control messages on datums are now shown in a smaller font size.
MI:Viewer	Equations and Logic (aka Math Functional, mafn) data is now shown in the Pass/Fail Report for searches that include Equations and Logic Attributes.
MI:Viewer	Improved the handling of search terms that contain punctuation characters such as the pipe (|) character e.g. gf50 | tech*
MI:Workflow	Fixed Workflow Designer bug where changes to the application URL or authentication settings made via the Settings menu could only be saved if the user had Administrator privileges.
Remote Import	Fixed a bug in the import of data that contains decimal commas.

Component	Description
Search	Improved support for searching large PDF documents by removing the limit on the number of characters that could be indexed. Previously, this limit could result in large documents being only partially indexed. Now, all documents smaller than 100Mb should be fully searchable.
Service Layer	Fixed a bug that resulted in a 400 bad request error after deleting a record from search results and then re-running the same search.
Service Layer	A warning is now logged in the logfile when Service Layer starts up and on the homepage if any Custom Reports are using a deprecated Service Layer API version.
Service Layer	The SingleDatum service should now specify a Cache-Control response header with a value of public, max-age=31536000. The URLs generated by the DataExport service should now include the last modified revision identity of the datum to which they link.
Service Layer	The LinkedRecordsDataType now always has a single recordLinkGroup instead of an array, so it more closely matches structure of other data types.

8 Known issues

8.1 Reports created in earlier GRANTA MI releases

In MI 2020 R1, the format of report jobs has changed. This means that report jobs created and submitted in earlier GRANTA MI releases will no longer be accessible after upgrading to this version: users will not be able to download any completed reports in the Report Monitor, or resubmit existing report jobs, and any scheduled jobs that have not yet been run will have to be resubmitted.

Note that the files on disk will not be deleted during upgrade, so if there was a really important report output that needed to be retrieved, then an Admin user would be able to recover it.

8.2 Data Updater—unexpected deletion of records in folders

When a folder is deleted in the source database, and an update is created that contains this change, that folder **and all of its contents** will be deleted in the target database when the update is applied. You should be aware that, even though the folder may be empty in the source database, other users may have created new records or moved records into that folder in the target database, and these will all be deleted along with the parent folder during the update.

Also, be aware that if records in the source database were moved from under a folder which is subsequently deleted, and an update is created that contains all of these changes, the deletion of the parent record will always be applied first on the target, meaning that the folder and the records that were moved are in fact deleted in the target.

To minimize the risk of records being inadvertently deleted when a folder is deleted, therefore, we recommend that, if a folder is to be deleted as part of a data update, all its child records should be moved in one update, and then the folder should be deleted as part of a separate, later update.

9 GRANTA MI User Assistance

User assistance for GRANTA MI is delivered in a number of different ways:

Help for application users

Help on how to use the features in GRANTA MI applications is provided online or installed locally and may be accessed from the application Help menu.

Reference documentation on the MI:Server or MI:Toolbox host

GRANTA MI reference documentation in PDF format aimed at IT Administrators, Granta System Admins and Data Administrators, and people importing/exporting data, is installed on the MI:Server and MI:Toolbox host servers during product installation.

For MI:Server, typically, this will be in

C:\Program Files\Granta\GRANTA MI\Server\Documentation

For MI:Toolbox, PDFs are installed in a *Documentation* subfolder within each plugin.

Reference documentation in MI:Viewer

GRANTA MI reference documentation is installed on the MI:Viewer application server and may be accessed via the application Help menu: Help > Reference Documentation.

Online Documentation library

Release notes and reference documentation for the current and previous GRANTA MI releases are all available in the *Documentation library* on the GRANTA MI Support site: log in in with your My Granta credentials, then click **Get documentation**.

Online Learning portal

A range of GRANTA MI training resources is available in the *Learning portal* on the GRANTA MI Support website: log in with your My Granta credentials, then click **Start now** to see what's available. The resources here are organized by role, e.g. Data Analyst, Data Editor/Importer, Developer, and include webinar recordings, short how-to videos, self-teach exercises, documentation, and help.

Table 1. PDF reference documentation available for GRANTA MI at this release

Document	Covers
RELEASE NOTES, INSTALLATION & SYSTEM CONFIGURATION	
Release Notes for GRANTA MI Version 2020 R1	New features, enhancements, and bug fixes in this release
GRANTA MI 2020 R1 System Requirements	Software and hardware prerequisites for GRANTA MI. The very latest version of this document is available online here.
GRANTA MI Installation Guide	Installing and upgrading GRANTA MI software components and Granta reference databases.
GRANTA MI Configuration Guide	Post-installation configuration for GRANTA MI, including setup for non-Windows authentication; search system configuration
GRANTA MI Access Control and Security	Authentication and authorization options for GRANTA MI

Document	Covers
APPLICATION & DATA ADMINISTRATION	
GRANTA MI Schema Guide	Detailed information about the GRANTA MI schema, and best practice tips on how to ensure that your company's materials data can be captured, maintained, analyzed, and deployed effectively.
GRANTA MI Administrator's Guide	Configuration and administration of MI:Server and MI:Viewer; administration of GRANTA MI databases
GRANTA MI Record Version Control	How version control is implemented in GRANTA MI, allowing changes to records and data to be tracked
GRANTA MI:Viewer Home Page Author Guide	How to construct customized application, profile, and database home pages for MI:Viewer users
GRANTA MI Automatic Link Creator	Use of the Automatic Link Creator CLI for creating static record links within a GRANTA MI database.
GRANTA MI Tabular Roll-up Module	Use of the Tabular Roll-up Module CLI to manipulate tabular data
GRANTA MI Help and Documentation	An overview of all the available user assistance for GRANTA MI
DATA IMPORT & EXPORT	
GRANTA MI Excel Importer Reference Guide	Required structure and format of the template workbooks used by the Excel Importer to import data into GRANTA MI from Microsoft Excel®
GRANTA MI Text Importer Reference Guide	Required structure and format of the templates used by the Text Importer to import data into GRANTA MI from text data files
GRANTA MI Bulk Data Importer	Use of the Bulk Data Importer CLI for batch data import
CAE Exporters for Granta Reference Data	Lists the CAE exporters available for each of the Granta reference data modules, and what type of data can be exported using each
GRANTA MI Excel Exporter Reference Guide	Required structure and format of the template workbooks used by the Excel Exporter to export data from GRANTA MI to Microsoft Excel®
GRANTA MI FEA Exporter Author Guide	Required structure and format for exporting data in a neutral XML format for subsequent analysis in a Finite Element Analysis (FEA) package
APPS	
MI:Explore Configuration Guide	In-depth information about how to create different MI:Explore configurations that allow users to see different data and different application features.
MI:Workflow 2 Configuration Guide	Application configuration options for MI:Workflow
MI: Workflow 2 Designer Guide	developing workflows with the MI:Workflow Designer tool