

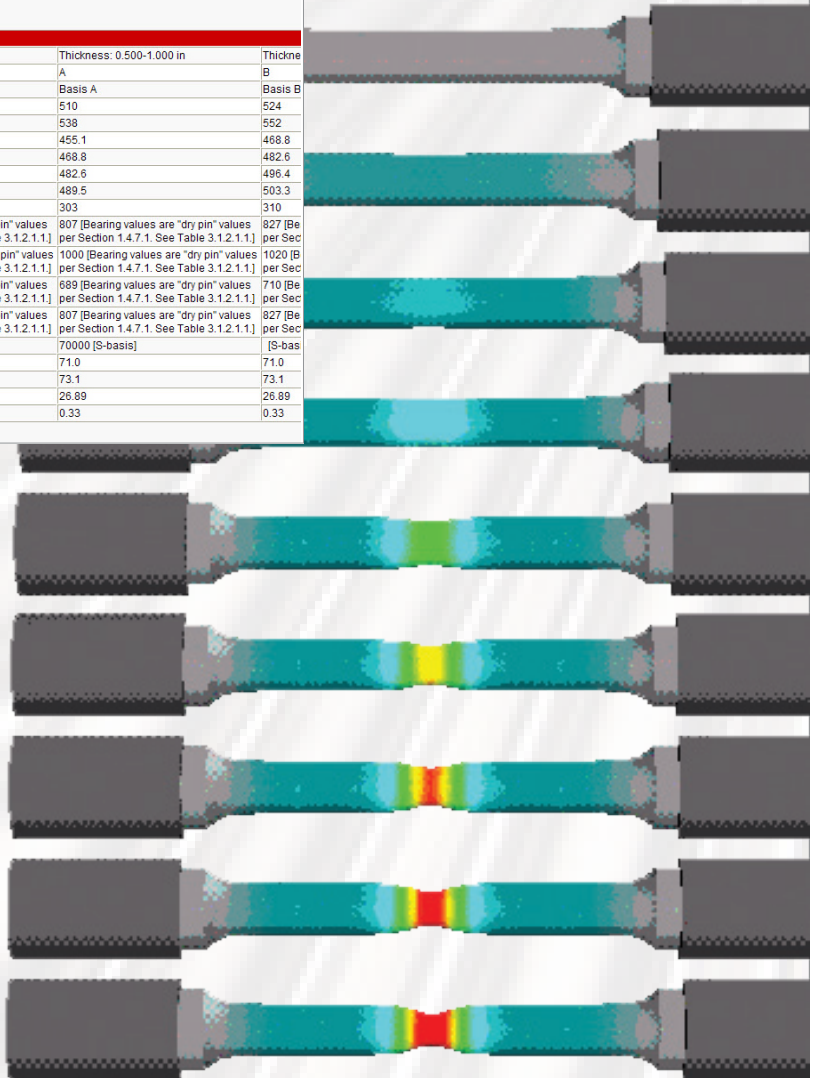
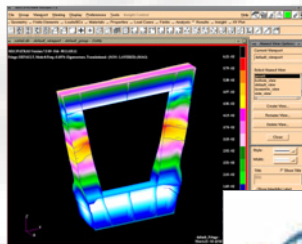
Enterprise Mvision 2010

MSC Software Databank: demo_metals Units: SI-Customary Property Set: PROPERTY Export to CAE Print Logoff

Show Common Data Other Actions: Create Text File (Displayed Property Set) (Figure: XY Points) Download Excel Macro

<< Back to Material List

	PROPERTY			
Characteristic dimensions	Thickness: 0.250-0.499 in	Thickness: 0.250-0.499 in	Thickness: 0.500-1.000 in	Thickness: 0.500-1.000 in
Statistical basis	A	B	A	B
Descriptive name of table	Basis A	Basis B	Basis A	Basis B
Ultimate Tensile Strength in L-dir. (MPa)	510	524	510	524
Ultimate Tensile Strength in LT-dir. (MPa)	538	552	538	552
Tensile Yield Strength in L-dir. (MPa)	448.2	461.9	455.1	468.8
Tensile Yield Strength in LT-dir. (MPa)	461.9	475.7	468.8	482.6
Compressive Yield Strength in L-dir. (MPa)	482.6	496.4	482.6	496.4
Compressive Yield Strength in LT-dir. (MPa)	482.6	496.4	489.5	503.3
Ultimate Shear Strength (MPa)	296	303	303	310
Ultimate Bearing Strength (e/D=1.5) (MPa)	807 [Bearing values are "dry pin" values per Section 1.4.7.1. See Table 3.1.2.1.1.]	827 [Bearing values are "dry pin" values per Section 1.4.7.1. See Table 3.1.2.1.1.]	807 [Bearing values are "dry pin" values per Section 1.4.7.1. See Table 3.1.2.1.1.]	827 [Bearing values are "dry pin" values per Section 1.4.7.1. See Table 3.1.2.1.1.]
Ultimate Bearing Strength (e/D=2.0) (MPa)	1000 [Bearing values are "dry pin" values per Section 1.4.7.1. See Table 3.1.2.1.1.]	1020 [Bearing values are "dry pin" values per Section 1.4.7.1. See Table 3.1.2.1.1.]	1000 [Bearing values are "dry pin" values per Section 1.4.7.1. See Table 3.1.2.1.1.]	1020 [Bearing values are "dry pin" values per Section 1.4.7.1. See Table 3.1.2.1.1.]
Bearing Yield Strength (e/D=1.5) (MPa)	669 [Bearing values are "dry pin" values per Section 1.4.7.1. See Table 3.1.2.1.1.]	689 [Bearing values are "dry pin" values per Section 1.4.7.1. See Table 3.1.2.1.1.]	689 [Bearing values are "dry pin" values per Section 1.4.7.1. See Table 3.1.2.1.1.]	710 [Bearing values are "dry pin" values per Section 1.4.7.1. See Table 3.1.2.1.1.]
Bearing Yield Strength (e/D=2.0) (MPa)	786 [Bearing values are "dry pin" values per Section 1.4.7.1. See Table 3.1.2.1.1.]	814 [Bearing values are "dry pin" values per Section 1.4.7.1. See Table 3.1.2.1.1.]	807 [Bearing values are "dry pin" values per Section 1.4.7.1. See Table 3.1.2.1.1.]	827 [Bearing values are "dry pin" values per Section 1.4.7.1. See Table 3.1.2.1.1.]
Ultimate tensile strain in LT-dir. (micro-m/m)	90000 [S-basis]	[S-basis]	70000 [S-basis]	[S-basis]
Tensile Elastic Modulus (L-dir.) (GPa)	71.0	71.0	71.0	71.0
Compressive Elastic Modulus (L-dir.) (GPa)	73.1	73.1	73.1	73.1
Shear Modulus (inplane: L-LT) (GPa)	26.89	26.89	26.89	26.89
Poisson ratio (inplane: L-LT)	0.33	0.33	0.33	0.33



Welcome to Enterprise Mvision 2010

This MSC.Software release of Enterprise Mvision continues to make strides in increasing user productivity and security enhancements that enable engineering enterprises to better access materials data via the web for use in computational modeling and analysis.

Customer-driven Usability Improvements

Enterprise Mvision 2010 boasts a new 'Simple' user interface with a whole new 'look-and-feel' and additional convenience features, including click-anywhere row picking, access to the new report generator, more consistent menu options and access to simple search operations.

The PDF Report Generator, first released in Enterprise Mvision 2008r1, generates beautiful, professional-quality reports for selected materials. The 2010 release extends its customization features to reports displaying multiple materials. These features extract data from the databank itself for use in headers, footers, and legend entries, pushing user productivity by eliminating manual revision.

As our users continue to push Mvision to its limits, the robustness of the system continues to evolve. Hence, new features were implemented to improve the handling of long, complex queries used in the Dynamic Security Queries and Export functions. Mvision can now support query strings up to 32,000 characters long and automatically assigns units to complex mathematical queries that involve engineering values, eliminating ambiguity in the export of calculated values.

Improving Productivity through Integration with CAE

Key to the overwhelming success of Enterprise Mvision has been its robust integration framework for the provision of materials data to CAD and CAE. Enterprise Mvision serves materials data via CAE-integrated clients to upwards of 6000 end-users at some of its larger installations, while enforcing traceability back to approved data sets. For each user, the time required to populate a complex solver is reduced from hours to seconds, offering the potential for man-years of savings per year. New enhancements enable the use of the Integrated Clients in high-security programs behind firewalls.

Ensuring Global Data Security

Known for its sophisticated handling of database security, the Enterprise Mvision 2010 release includes features that enhance the dynamic query-based security system that enforces security changes 'on-the-fly.' A user whose security credentials have changed can literally be expelled from a user session without affecting other users who are logged into the system. Now THAT's security!

Enterprise Mvision 2010 enhancements were designed to improve the user experience of the software, improve the robustness of existing functionality and extending it as requested by our customers.

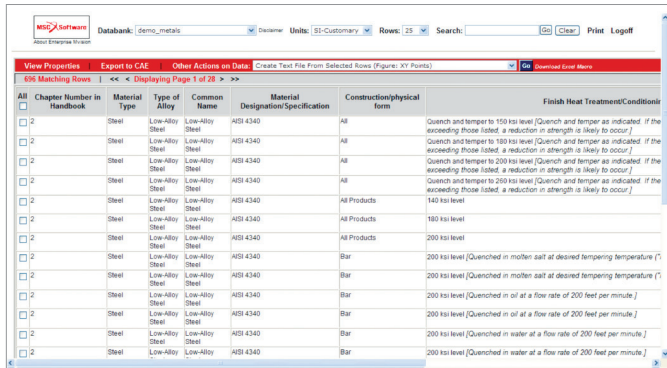
Thank you very much for your continued support of Enterprise Mvision.

The MSC.Software Product team

New Simple Interface

The Simple Interface was originally designed for quick and easy access to materials data. Simple string searches allow a user to retrieve data for a specification, lot number or other identifying feature. A couple of clicks are all that are required to retrieve materials properties, export data to text files, Excel or your favorite analysis code, or print a report.

Now supported by its own style sheet, *simple.css*, the new Simple Interface not only has a more modern look and feel, but can be modified quickly and easily by modifying a line in the style sheet, rather than editing the core HTML pages.



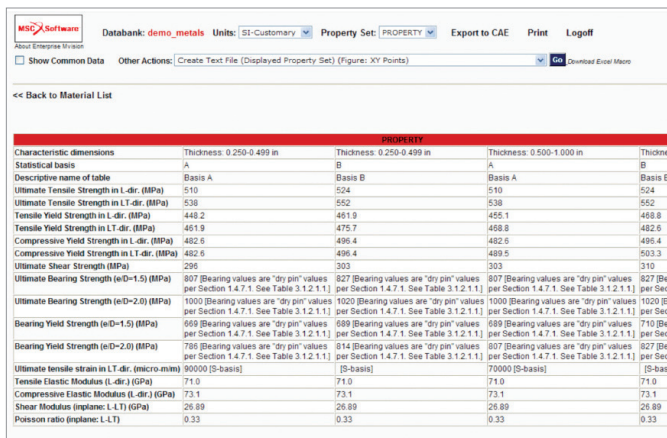
Browser View of the Simple Interface is Clean and Efficient

The design of the Simple interface, while using EMV tag technology for the data retrieval elements, implements usability enhancements such as click-anywhere row clicking to minimize scrolling, easy-view menu options that minimize picking, and consistent menu layouts between pages.



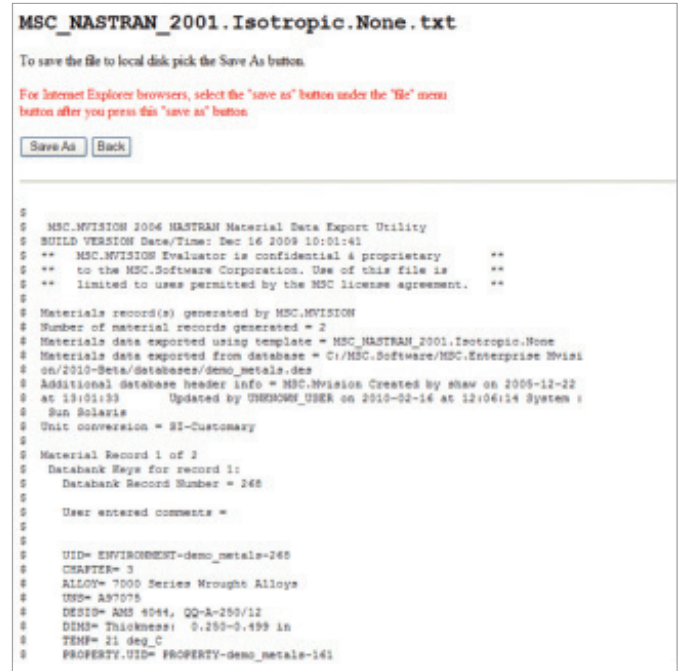
Easy-View Menu Options in the Simple Interface Minimizes Picking

Having selected one or more materials a 'View Properties' pick is all that is required to compare the property sets for a group of materials. The extra steps required to copy and compare on a clipboard are avoided.



Comparison View of the Simple Interface Enables Easy Differentiation between Materials

Having verified the properties, a single click on "Export to CAE" allows you to export the properties for the various materials directly to your favorite CAE code – fast, easy, and error-free – or to simply print a report for distribution to other team members.

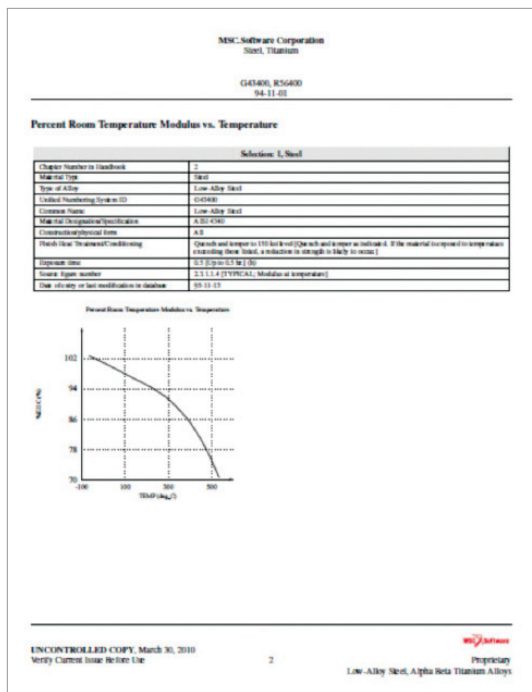


Auto-Populated Nastran Mat1 Card Is Error-Free

If you like the look and feel of the Simple interface, but prefer to use an interface with more robust query features, you can apply it by copying elements of the simple.css style sheet to that of another user interface. The style sheets for Enterprise Mvision interfaces can be found in your <webserver_install_dir>/emv/msc/emv directory.

PDF Report Customization

The PDF Report Generator now allows multiple database entities to be used in the header, footer and legend display, improving the flexibility and extending the use of this feature. This feature is enabled on the EMV Server by setting the property *hardcopy.report.display.mergeattributes* in the *EmvHardcopy.properties* file to *true*. Other features, such as the addition of logos, custom text, the size of figures and positioning of the curve points display relative to the plot (i.e. next to the plot or below it), are also customized using this *properties* file.



Sample PDF Report with Multiple Materials in Header and Footer

Units in Complex Queries

Mvision provides the ability to implement complex queries in the export functions to enable the use of calculated values in export, reducing the demands on data storage. Enterprise Mvision 2010 enables auto-assignment of unit strings to the calculated value, eliminating the potential for misinterpretation of the calculated values.

Improving Traceability of Materials Data in CAE

Mvision customers obtain tremendous productivity gains, improved accuracy of data in CAE and traceability of materials data use by auto-exporting data to CAD and CAE. Enterprise Mvision 2010 enables the export of ALL the pedigree data associated with the materials properties used in export functions. This feature can be turned on / off by setting the *useAllAttributesForExportComments* flag to *true*.

Extending the Use of the Integrated Client through Firewalls

Enhancements to the 2010 release enable the use of the Integrated Clients in high-security programs that exist behind firewalls by allowing the installer to specify the range of ports used for communication between the EMV Server and the Integrated Client. This range, which is set in the *MscSdmIc.properties* file, corresponds to the number of Integrated Clients that can run simultaneously. It is possible to restore the default TCP/IP behavior of allowing the Integrated Client to select its own callback port by commenting out the *server_port_range* values in the specified configuration file.

Ensuring Global Data Security Using Complex Queries

Implementation of the Security Query in Enterprise Mvision 2008r1 resulted in customers implementing extremely long query strings that surpassed the current database limits. Enterprise Mvision 2010 increases the robustness of Mvision query capability by extending the potential query length to 32,000 characters. The Security Query can be implemented via XML file or programmatically by implementing using *EmvUserLoginDataAPI.cpp*.

Enterprise Mvision – Committed to you

With your continued support, MSC.Software is committed to enhancing our core materials solution, Mvision. With the new and upcoming enhancements, you can see your current and future training support and training expenses reduced not only because of staying with proven, familiar software, but also because of the usability improvements.

MSC's Commitment to its Customers

We at MSC.Software recognize the needs of our customers and appreciate the confidence and trust they have placed in our products all these years. This is demonstrated by the customizations of the product and level of integration of our products into their CAE processes. MSC. Software commits itself to customer needs and requirements and as such, has focused on improvements in usability, performance and solver support. You will be seeing more advances going into the product and we, as always, are pleased to have you as a customer and partner.