

With CAMPUS®, the user can

- ▶ View all properties reported for any listed product(s)
- ▶ Print the data for any product(s)
- ▶ Search for products satisfying specific property requirements
- ▶ Select and view properties for comparison
- ▶ Sort according to specific requirements
- ▶ Switch between SI and US units
- ▶ Choose and plot any pairs of properties for listed products
- ▶ Overlay up to 10 curves of different products

These functions are available with the standard **CAMPUS®** software. For occasional users an alternative, extremely easy interface "CAMPUS® DeskView" is available which allows to select grades from an alphabetic list and print the relevant datasheet. A limited search for grade names and base polymers is also possible.

Advantages of CAMPUS®

- 1 Available **FREE** directly from participating resin suppliers
- 2 Confidence in material selection because of consistent and comparable data
- 3 Ability to create a comprehensive plastics information system on a personal computer or on a host computer
- 4 Ability to compare data from multiple suppliers with the commercially available merge programs
- 5 Access to up-to-date information on a broad range of products
- 6 Elimination of the need to learn different database operating systems, since all resin suppliers adopting the **CAMPUS®** concept will report data in the standard **CAMPUS®** format
- 7 **CAMPUS®** also contains valuable data to be used in design software, like process simulation and structural analysis. Interfaces to CAE software are available via the merge program **MCBase**.

Hardware requirements

- Computer Windows® 3x, Windows® 95/98/ME or Windows® NT/2000
At least 20MB free harddisk space to allow installation of multiple supplier data files and 8MB dedicated memory (RAM)
SVGA adapters with 800x600 pixels, 16 colors (1024x768 pixels, 256 colors recommended)
Internet connection (optional)
Note: The **CAMPUS®** program can be run on any Macintosh or UNIX systems equipped with a Windows® emulation program
CAMPUS® Desk View will not run on Windows® 3x
- Printer All printers supported by Windows®

Visit our web site at www.campusplastics.com

Here you will find

- ▶ an up to date list of participating resin suppliers and reference addresses
- ▶ links to those producers who offer **CAMPUS®** for download via internet
- ▶ the latest news and messages in relation to **CAMPUS®**
- ▶ information about the standardization background of **CAMPUS®**
- ▶ **CAMPUS®** WebView, interactive access to complete data sheets of all **CAMPUS®** materials.



To order **CAMPUS®** interested end users are requested to contact the individual participants as listed at www.campusplastics.com.

Plastics producers who are interested in joining **CAMPUS®** can receive a license from

- ▶ **CWFG**
Chemie Wirtschaftsförderungs-GmbH
Karlstrasse 21
D-60329 Frankfurt
Germany
Fax +49-(0)69-2556-2320
E-Mail stephan@cwfg.de

For technical questions please contact the software developer

- ▶ **M-Base Engineering + Software GmbH**
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D-52068 Aachen
Germany
Fax +49-(0)241-963-1469
E-Mail info@m-base.de

CAMPUS®, registered trademark of Chemie Wirtschaftsförderungs-Gesellschaft (CWFG) mbH



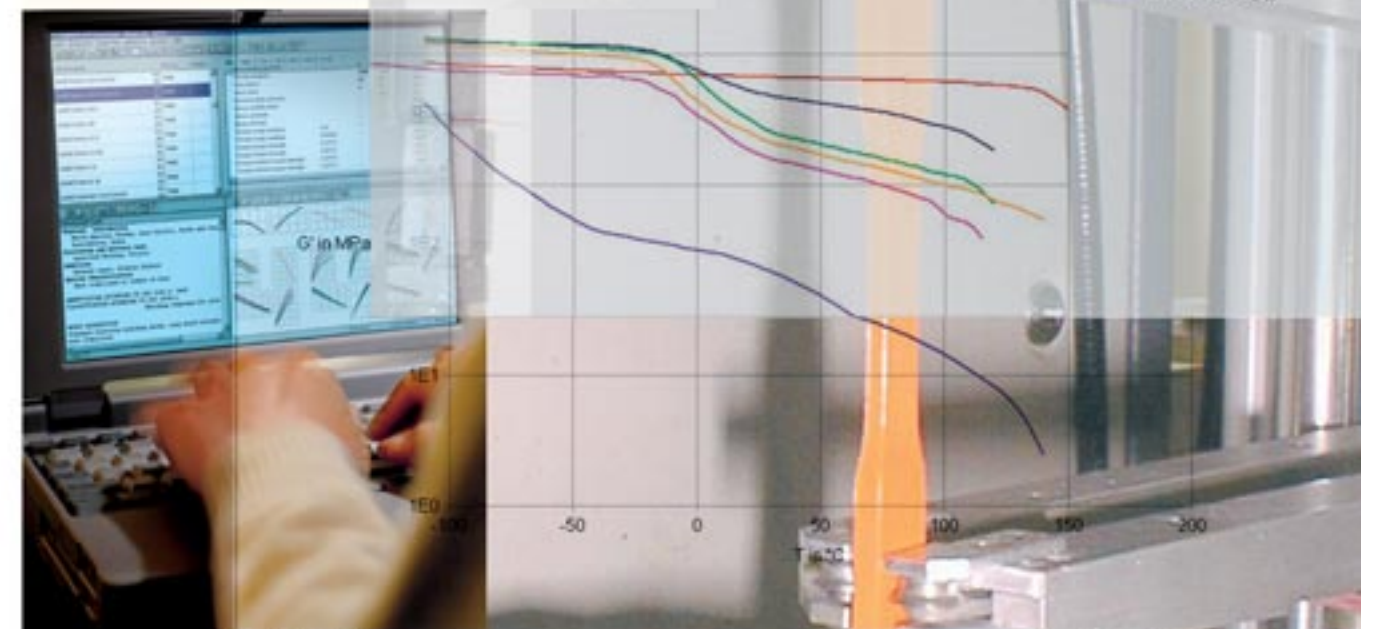
CAMPUS®

[Computer Aided Material Preselection by Uniform Standards]

WORLDWIDE STANDARD IN PLASTICS DATABASES FOR THE 21ST CENTURY

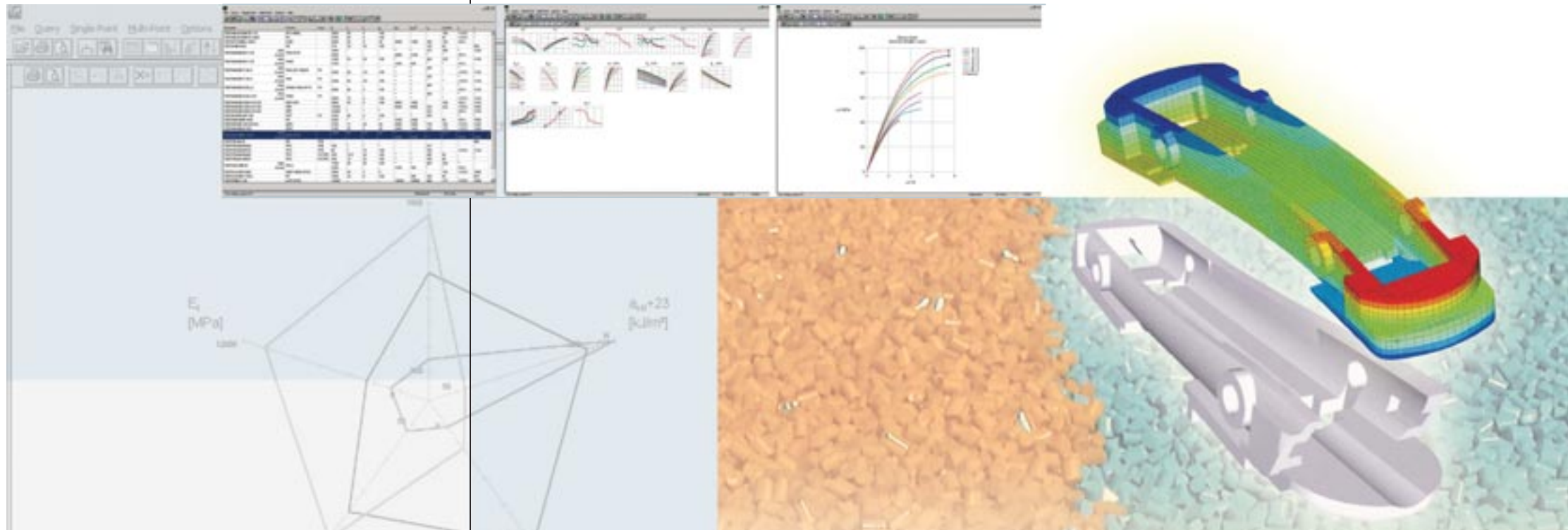
Visit the website at www.campusplastics.com

CAMPUS® (Computer Aided Material Preselection by Uniform Standards) has become the most successful and widely used materials database for plastics. Today more than 50 plastics producers worldwide are providing technical data on their products using **CAMPUS®**. More than 300.000 copies have been distributed since **CAMPUS®** was first introduced in 1988. Major OEMs, especially in the automotive industry, have made the **CAMPUS®** database available to all their engineers as the single source for plastics information. This remarkable success is based on the unique concept of an uniform global protocol for acquisition and representation of data, combined with user-friendly software. **CAMPUS®** is the first and the only database system which provides truly comparable data on products from different resin suppliers.



THREE KEYS TO SUCCESS

CONTENT, FEATURES AND FUNCTIONALITIES OF CAMPUS®



1 Uniform Global Standards

In order to produce truly comparable data, it is vital to use uniform test specimens, standard molds, narrow specimen molding conditions specifically defined for each resin family, uniform test standards, and uniform test conditions. This is accomplished in **CAMPUS®** by embracing the three key International standards for comparable data: ISO 10350, ISO 11403-1 and ISO 11403-2.

The underlying idea for **CAMPUS®** is simple: provide comparable, informative, and only necessary practical data. The **CAMPUS®** database does not strive to encompass an exhaustive list of properties for each product. It does include a standard set of practical properties considered useful for the material preselection process.

2 User-friendly software

The traditional desk top version of **CAMPUS®** is self contained, with the operating system, graphic drivers, data with built-in unit conversion capability, and auxiliary information, all on one CD. It's user-friendly format for Windows® makes it easy to use. An interactive internet version is also available.

A significant development which greatly enhances the power and functionality of **CAMPUS®** is the commercially available MERGE program (**MCBase**). With the merge program, the user can create a comprehensive product information system combining data from different participating resin suppliers into a single searchable datapool.

The software has been developed by M-Base GmbH, Aachen, Germany.

3 Free distribution in multiple international languages

CAMPUS® is distributed free of charge to qualified customers directly from participating resin producers. Most participants offer **CAMPUS®** convenient via Internet download. It's availability in six languages - English, German, French, Italian, Spanish, and Japanese - makes it quite versatile.

Single Point Data

- ▶ rheological properties
- ▶ mechanical properties
- ▶ thermal properties, including flammability characteristics
- ▶ electrical properties

Specific single point properties for the characterization of Thermoplastic Elastomers (TPEs) and film grades measured with clearly defined conditions and using newly developed uniform test specimens have recently become available in **CAMPUS®**.

Specimen molding conditions, additives, special characteristics, processing options and recommended processing conditions are also included.

Multi Point Data

- ▶ viscosity data
- ▶ dynamic shear and Young's modulus and tan delta versus temperature
- ▶ tensile stress strain curves over a wide range of temperature
- ▶ isochronous creep curves and creep modulus curves at low, ambient and elevated temperatures and several stress levels
- ▶ specific enthalpy and specific volume (pvt) versus temperature

Chemical Resistance

With the latest version of **CAMPUS®** information about the chemical resistance of materials becomes available for the pre selection. Due to the many influences of temperature, time, concentration, type of contact and combination with other loads as well as the many different types of possible damage after chemical attack, this information can not be completely presented in a standardized and uniform format for all commercial grades. **CAMPUS®** offers an easy searchable classification of materials, based on references, which can be precise test results or experience in relevant applications.



CAMPUS®

[Computer Aided Material Preselection by Uniform Standards]