



Special Edition for K2010 in Düsseldorf

M-Base Engineering + Software GmbH is one of the world's leading software suppliers for material databases and product information systems.

Our systems are amongst the most widely distributed material databases worldwide. The focus of our development is on the provision of high

quality material data, the distribution via internet and the integration of material data into e-commerce, CAE and other systems.

Our success is based on the combination of our expertise in material data management and the newest software technology, which enables us to offer individually

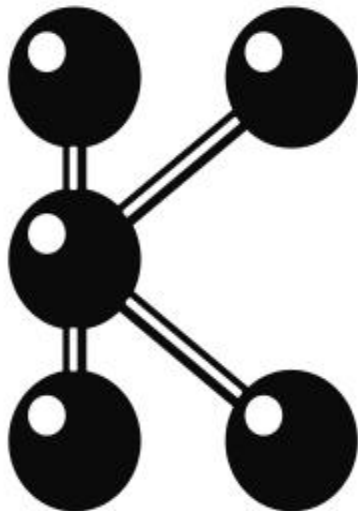
optimized systems. Simulation software complements our product spectrum.

Further on, we offer extensive consulting in all areas of material data and their management and systems for material modeling.

Visit us at:

Düsseldorf

October 27 - November 3, 2010



2010

M-Base

Hall 5

Booth No. 5 E04

The International Trade Fair Plastics + Rubber **K2010** is the most important international event for the plastics industry this year.

We consider this an excellent opportunity to provide our multinational customers with news about the latest trends in the area of **material information systems** and **design software** for the plastics industry. This special edition of M-

Base News gives a brief overview of our products and services that will be presented at the exhibition. At our booth No. 5 E 04 our team will be available for demonstrations and professional discussions. Our software will also be presented at several other booths by our customers.

We would be pleased to welcome you at the K2010 in Düsseldorf. In order

to guarantee the best possible consultation, we recommend to register your visit in advance. For this, you can either use the enclosed reply sheet or call directly and arrange a meeting. The number is: **+49-241-963-1450**. During the exhibition hours we can be reached by mobile phone on **+49-174-436-1318** in order to make appointments on short notice.

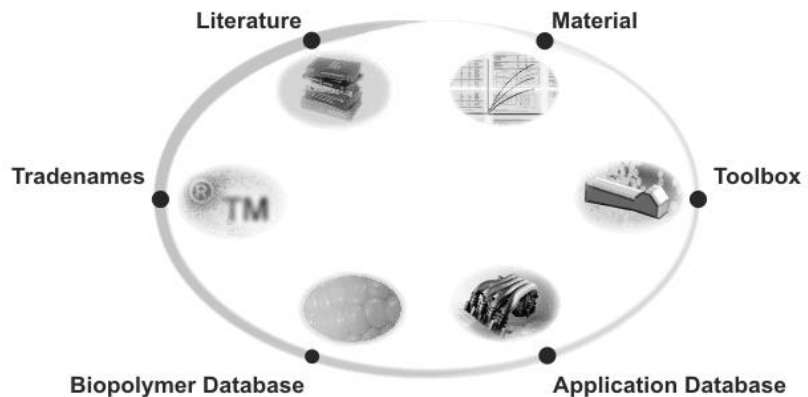
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Focus: Integration

M-Base is a leading supplier of material information systems to the international plastics industry, covering all phases of the production chain from material producers to manufacturing companies. Focus of our presentation at the K show in Düsseldorf will be the **integration of material data into all corporate processes.**

By consequent application of the latest **internet** technology, all material related processes can get access to one common data basis. Efforts can be reduced and error sources are eliminated. In a modular concept the following processes and systems can be included:

- laboratory information systems
- material test evaluation and material modeling



- Design/CAE
- communication with external organizations
- product information systems
- internet information systems
- links to knowledge management

A comprehensive spectrum of **standard software** tools, which can be adjusted to individual customer's situations, are available for these purposes. **Consulting** support in the design and specification process of material related information systems is also offered.

Material Data Center

Material Data Center is a comprehensive internet portal for plastics. It includes a material database, which contains the complete content of the **CAMPUS** database as well as data collected from other sources (both ISO and ASTM); also an application database, a tradename directory for plastics and several tools to support designers.

The material database includes single point data, as well as graphical information (multipoint data). For both categories extensive tools for **navigation** and **search** are available, like generation of tables, zoom and print functions (e.g. based on pdf - formats).

Material Data Center also offers **calculation programs** for bending cases, snapfits, flow length and cooling times, as well as an unit converter. In short: Material Data Center offers any useful function needed by engineers during material selection and design. Special

versions with **interfaces** for several CAE systems are also available on request. Registered users have free access to all datasheets. The extended version with search and sort functions is available against a small annual fee. Free temporary demonstration access and order forms are available at:

www.materialdatacenter.com

Referring to our focus theme at this year's K show, the **integration** of material data into all decision making processes, Material Data Center has been extended by extensive **text based documents**. The integrated literature database of Material Data Center offers thousands of articles from "Kunststoffe international" and "Plastics Technology" and several textbooks, like the International Plastics Handbook, the Plastics Additive Handbook and more.

Material Data Center is not only available for customers via internet, it is also possible to provide the soft-

ware or individual adaptations of the software for installation in customers internal infrastructure for a very good cost/performance ratio. Powerful modules for data editing and administration allow to build up individual material information systems.

Resin producers, who want to offer their customers an **individual internet product information system**, should also take the use of the Material Data Center software into consideration. M-Base offers modifications of the basic system, in order to meet any special requirements concerning functionality, data content, data structure and corporate identity.

**Access to
Material Data Center:
www.materialdatacenter.com**

Access for one year: 350,- Euro plus VAT.

Free access for one week available online



New Service from M-Base: Data Management

For many years M-Base has successfully offered systems for the management and distribution of material data. In order to provide high quality data for our internet system Material Data Center and keep the system up to date, we have build up a team of highly **qualified specialists**. This team is able to investigate, collect, analyze, process, document and store material information with high quality standards.

The team is experienced in material technology and material testing, as well as in mathematical modeling of data and the management of data. We now offer these capacities, which were only used internally, to support our customers on **consultancy** basis.

As a result of the continuing concentration on core businesses and the

shortage of resources, many companies have a hard time to maintain the management of material data in the required quality and efficiency. At the same time the importance of material information is growing in all business areas.

Our new team is available to offer all companies who face this kind of problems a safe and **very cost effective** alternative.

Our services cover all processes of data management:

- management and evaluation of material tests
- material modeling
- maintenance of material data
- **data acquisition**
- provision of specific datasheets and other documents

• interfaces to other systems, ERP,...

- **data publishing**
- analysis and optimization of data structures and workflow
- hosting of information systems

Our services are used by a broad spectrum of customers, like:

- material producers
- distributors
- users of materials
- companies who need to manage **regulatory information**
- trade organizations
- CAE groups

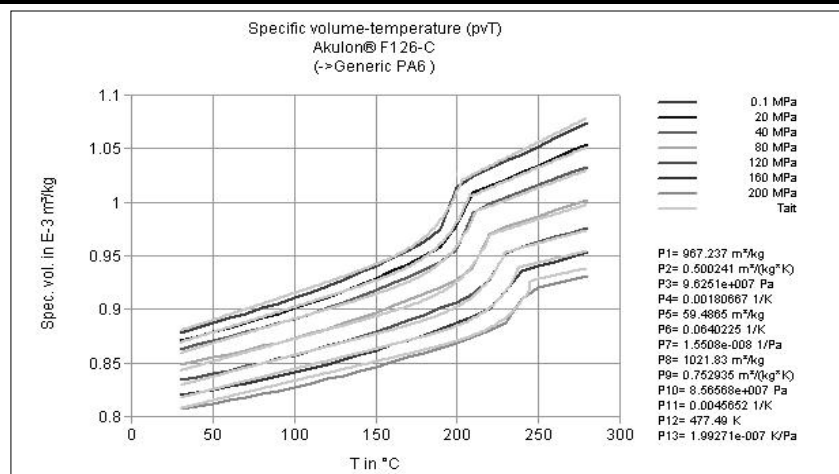
Due to the highly specialized team we are able to help our customers quickly and very cost effective. Data security and protection of business secrets is guaranteed.

Material Modeling

For many years now, M-Base is a leading software supplier for effective material data management. Recently, our spectrum has been enlarged to dataprocessing and **mathematical modeling**. These steps are of great importance within the chain of process. At the beginning it is necessary to process physical results in order to determine the needed material properties and later on it is important to allocate and to format data for subsequent processes, mainly all variations of **CAE systems**.

Also the presentation of data in **documents/brochures** and in databases requires modifications of the raw data, which are extremely time consuming, if not supported by proper software tools.

Meanwhile, we have extensive software and reference systems available in the area of test evaluation and modeling. These comprise all steps within the determination of material properties, for example, import of raw data from



pvT Fit for Plastics

test machines, polishing, averaging, statistical analysis, determination of the requested engineering properties and the regression analysis for determining the parameters for the material- and process models to apply. The specific advantage of our software is, besides the **accuracy** of analysis, the high speed. It allows the visualization of the results online and **graphically interactive**. That is how the user receives more control over the

workflow and furthermore, the results are considerably better than those gained by conventional analysis. Our software can be used, for instance, to evaluate tensile tests for steel as well as for plastics (including high speed tests for crash simulations), and the determination of model parameters in the area of viscosity, pvT and creep, which are part of our standard software **Material Data Center** in the meantime.



Biopolymer Database

Lately the interest in biomaterials is growing rapidly, due to the general interest in **sustainable** products. Many companies would like to use such materials, however elementary information about the materials and their properties is missing and engineers have no chance to select proper materials.

Many suppliers of biopolymers are not very familiar with the plastics industry and don't know the common requirements concerning customer support and product documentation. The available material datasheets fall short of the expectations concerning significance and comparability in the plastics industry.

In a project, funded by the German Federal Ministry of Food, Agriculture and Consumer Protection through Fachagentur Nachwachsende Rohstoffe e. V., a biopolymer data-base is being established by **M-Base** and

Fachhochschule Hannover to close these gaps.

A first version of the system concentrates on the documentation of material data published by the suppliers. This data gives some overview of the market, however the information does not allow any comparison between material from different suppliers or with conventional plastics, because the material tests have not been carried out under uniform standards and conditions. The collected data is presented in the database in the form of **datasheets**, without any possibility for numerical search or comparison.

Meanwhile the second generation of the system has been launched and will be presented at the K 2010. To improve the significance of the system, Fachhochschule Hannover has collected samples of relevant biopolymers and in an extensive

project these were **tested** according to uniform methods. These tests are still going on, first results are already published in the database.

The material tests have been performed as close as possible to the international **ISO standards** and the rules of the international CAMPUS system. Only in cases, where existing standards could not be applied, like missing rules for specimen production, new standards were created.

Consequently the system allows extended database functions with the newly measured data.

Access to the biopolymer database is available for free at:

www.materialdatacenter.com

ANSWER SHEET:

M-Base Engineering + Software GmbH, Dennewartstr. 27, D-52068 Aachen, Fax: +49-241-963-1469

Please send us more information about:

- Material Data Center other: _____
 CAMPUS _____
 CAE data interfaces _____
 Services in relation with _____
 data management _____
 Material modeling _____
 Biopolymer Database _____

I want to visit M-Base at K2010 on the following date: _____

For new readers:

I would like to receive M-Base News by e-mail in future.

Title, first name, last name: _____

Company: _____ Phone: _____

Position, Department: _____ Telefax: _____

Address: _____ E-mail: _____

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