

Events:

Seminar dates:

CADMOULD® 3D-F RAPID Seminar

19th August 2010, simcon in Würselen, D

Application forms can be found here:
www.simcon-worldwide.com

21st September 2010

CADMOULD® 3D-F User Meeting 2010

Aachen, D

29th and 30th September 2010

Kunststoffen 2010

Veldhoven, NL



27th October - 3rd November 2010

K 2010 International Trade Fair No. 1
for Plastics and Rubber worldwide

Hall 11, Booth No. F21
Trade Fair Düsseldorf, D



Simcon's new website is online

Simcon has the philosophy that close cooperation with its customers ensures efficient and successful projects and products. Therefore continuously both the product and service sectors expanded and enhanced their communication activities



with our customers during the last two years e.g. by this newsletter. To show the proximity to our customers, we have developed *Simcon's* slogan "always closer."

Simcon's philosophy was the driving factor for content and design of our new website. Besides information about our products and services, the news sections informs about further activities of *Simcon*. Here you will find information on seminars, fairs, events and conferences where *Simcon* is represented. You can also find all issues of the *Simcon-news* as well as

press releases, published articles and interesting links.

Curious? Have a look at www.simcon-worldwide.com.

Suppliers Innovative 2010 Audi Forum Ingolstadt

On 23rd June 2010 the „Suppliers Innovative 2010“ took place at Audi Forum in Ingolstadt, Germany.

Simcon participated as an exhibitor at the event with great success. *Simcon* presented:

- **CADMOULD® 3D-F 2K & INSERT**
Injection moulding simulation of multi component parts and parts with inserts
- **CADMOULD® 3D-F CONVERSE**
Interface for the transfer of non-isotropic properties (fiber orientations) from process to structural simulation
- **CADMOULD® VARIMOS** Automatical virtual and real injection moulding optimization system for part and mould geometry as well as production process

Many interesting new contacts to automotive industry were established and new ideas for products and services were born. *Simcon* will inform you about any outcoming progress in the *Simcon* news.

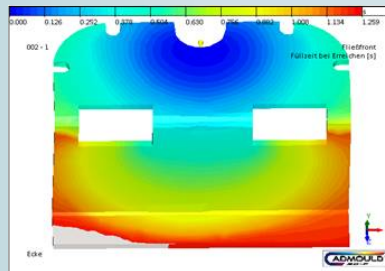
Asymmetrical filling at symmetrical moulds



Injection moulding simulation

Even in completely symmetrical moulds cavities asymmetrical filling patterns can occur. The most common reason for an asymmetrical filling is a non-uniform wall temperature distribution. This can emerge from different causes such as too long or geometrically unequal cooling channels.

This complex of problems can be simulated using the **CADMOULD® 3D-F** modules **FILL** and **COOL** providing the possibility to find suitable solutions.

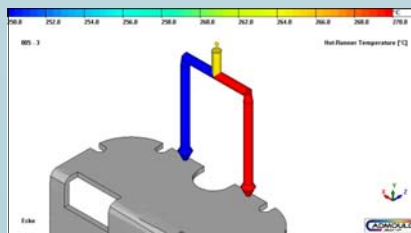


of these materials.

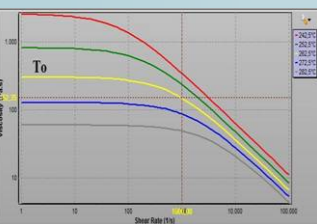
Filling can be made less sensitive to temperature effects by using higher injection speed leading to shorter filling times.

Another reason for asymmetrical filling can also be temperature differences in

the hot-runner system due to uneven heating conditions. This effect can be simulated with **CADMOULD® 3D-F FILL**: The segments of a hot-runner system can be assigned different temperatures via the menu "Simulation / Process Parameters / Hot-Runner Temperature Input".



Different temperatures at different sections of the hotrunner



Viscosity chart

Especially sensitive materials to this effect are polymers with a high temperature dependency of their viscosity as observed with polycarbonates (PC) and polybutylene terephthalates (PBT). This behavior is described by the large distance of the viscosity curves at different temperatures

Tips & Tricks

Mesh preparation using groups

The latest version of **CADMOULD® 3D-F** offers the possibility to create automatically a finite element mesh with different mesh densities. This requires the definition of groups in the STL file. Since elements can only be assigned to a group as a whole, and STL meshes are often very coarse the feature "Cut" is very helpful to create groups as they are needed.

To cut a part the feature "Cut" has to be selected. Then a point in the cutting plane and the cutting direction must be selected. The tick mark "Cut to Groups" has to be active.

All elements in the defined cutting plane are now cut, subdivided and assigned to different groups.

Using this feature, it is easily possible to assign segments of a part to separate groups allowing e.g. a finer mesh generation in areas as film hinges.