

M AUTODESK® MOLDFLOW® 2021

The expert injection and compression molding simulation solution

Visit www.moldflow.com to find out more

Moldflow 2021 offers enhanced simulation tools to help meet the demands of the most challenging injection and compression molding applications.

The latest release of Moldflow introduces increased productivity, capability, and efficiency in your workflows to provide higher quality products with a shorter time to market.

Chemical foaming agent degree of reaction
Time = 75.89[s]

0.4229

0.3172

0.2115

Polyurethane foaming process conditions data

Initial water concentration by weight: 0.906

Initial Polyol concentration by weight: 49.31

Initial Isocyanate concentration by weight: 53.70

Initial dissolved CO2 concentration by weight: 0.0444

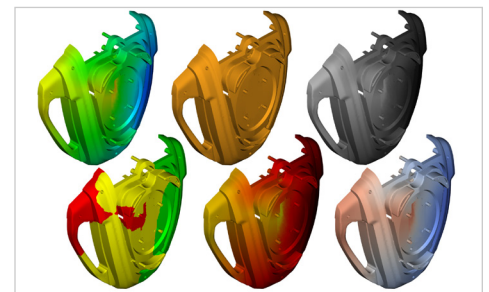
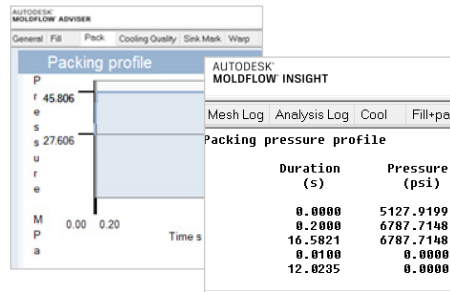
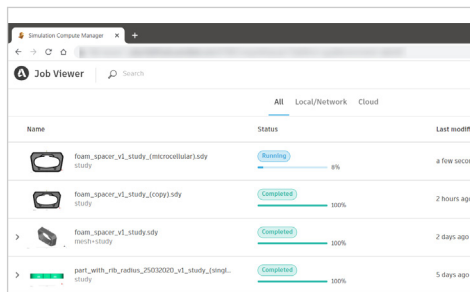
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Chemical Foam Molding

Simulate the process of injecting a small amount of reactive material, such as polyurethane (PU), into a cavity and introducing foaming gas agents.

Two solvers are available based on the desired material - the PU foaming option and the general chemical blowing agent reaction.

This release introduced the new polyurethane solvers, introducing more possibilities for lightweighting and insulator properties in your parts.



Simulation Compute Manager

A new Simulation Compute Manager (SCM) replaces the previous Simulation Job Manager (SJM). It improves job stability and broadens the scope of sharing job status and monitoring simulations with a browser-based interface.

Automatic pack/hold profile

The new automated pack/hold option improves accuracy while reducing user set up time by calculating an optimal pack/hold profile instead of a single value, as the default option provides.

Result scale customization

A new series of viewing options for result display provides easier visibility of flow patterns and other results. These scale coloring options enhance the result interpretation experience for all users, including those with color restrictive vision.

Retractable core pin constraint

This new constraint allows the specification of a retraction time for a core or part insert, after which the constrained region will no longer effect the molding process.

Reactive microcellular injection molding

To expand the simulation capabilities of microcellular injection molding, new solvers have been added to now simulate this foam molding technique with reactive materials.

Enhanced 3D sink mark results

Moldflow Adviser and Insight 2021 both deliver improved accuracy to 3D sink mark results with the updated solvers. It can now capture shallow and wide rib features on plastic parts.

Application Programming Interface (API)

UI and solver API is now available across all license levels of Moldflow Insight, for a greater ability for customization and automation in workflows.

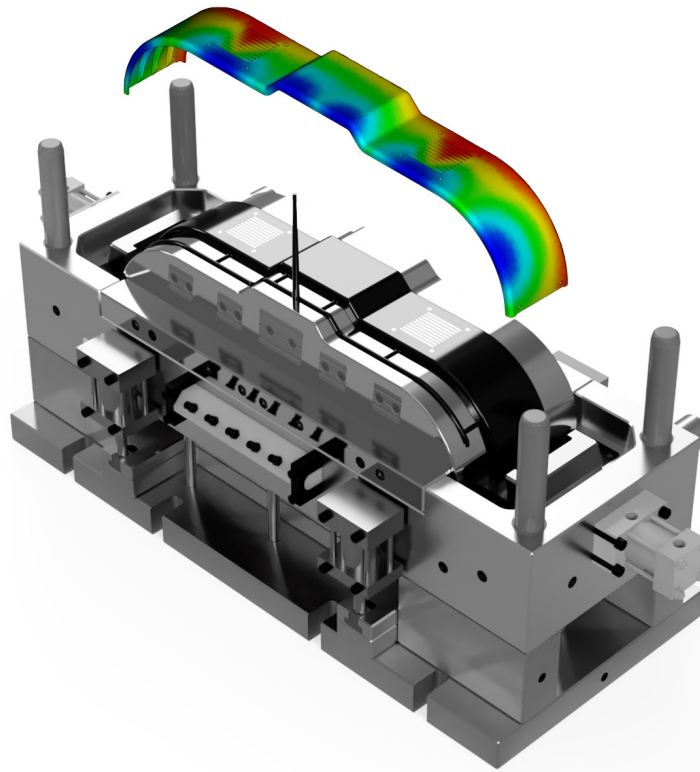
New API functions for fiber orientation and molding machine support broaden the scope of automation capabilities.

Solver accuracy improvements

Updates to the Moldflow 2021 solvers have been implemented for improved accuracy of your simulations. This includes calculations for semi crystalline materials, weld surface prediction, valve gate controls, and improvements to composite material mechanical property predictions.

Over 11,500 materials

Moldflow 2021 has reached over 11,500 material grades pre-loaded within its database. This release added 690 grades, and continues to support manually loading in your personal materials for even more possibilities of material choices.



“The design and manufacturing industry is changing every single day, and we have to make sure that we use every tool out there available to us. With Moldflow, we know we are going to get it right the first time around.”

– Sebastian Munera
Engineering Manager
Schneider Electric