ALTAIR
ONLY FORWARD

RELEASE NOTES

Altair® Inspire™ Mold 2023

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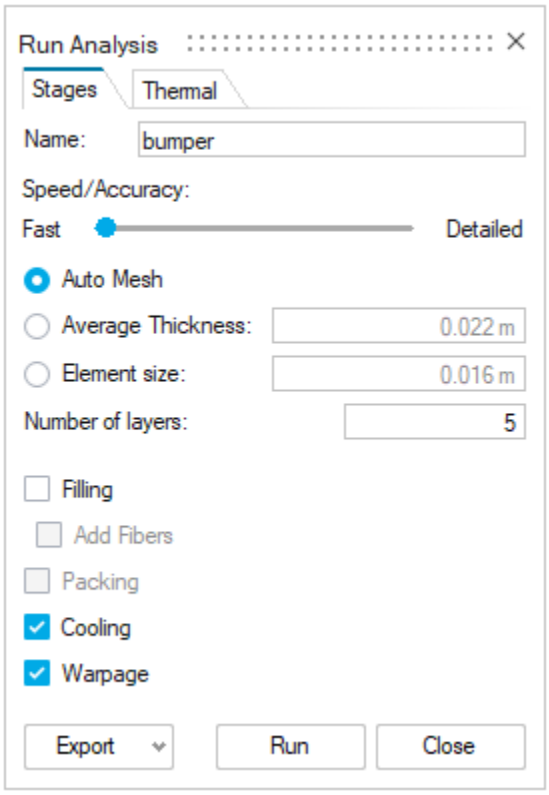
New Features and Enhancements 2023

Altair Inspire Mold 2023 includes the following new features and enhancements.

Warpage analysis

Warpage analysis is now available for fast solver calculations. You will be now able to determine displacements and stresses more quickly by running a fast analysis.



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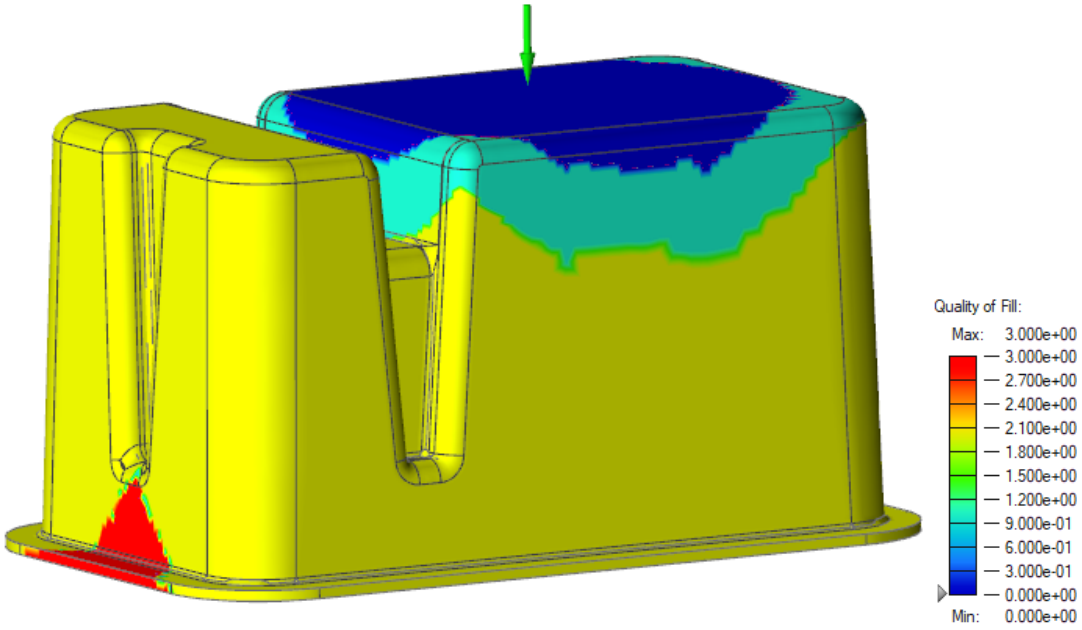
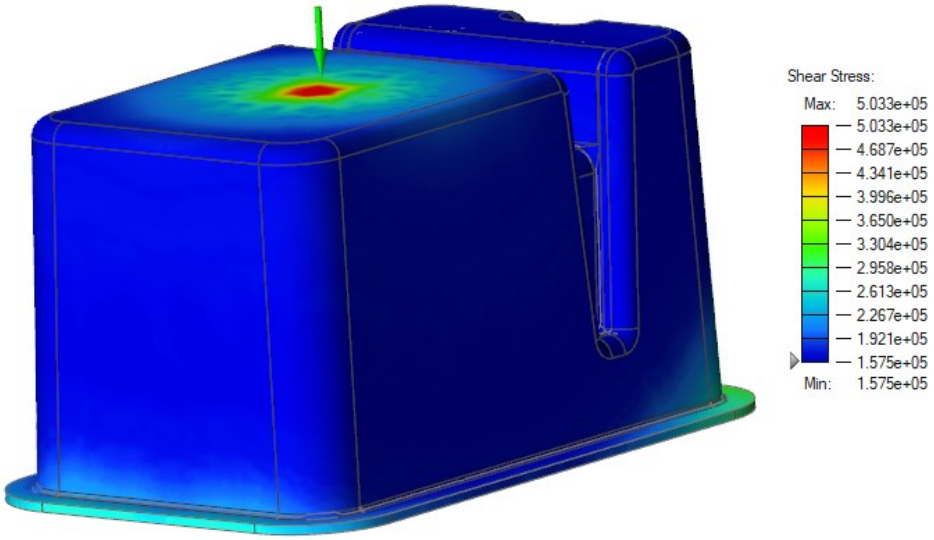
Quality of Fill

This new analysis will help us to find the optimal process conditions for polymer filling inside the cavity. Quality of fill analysis will be shown in a range of identifiers that goes from acceptable to short shot.



Shear Stress

This new result will help us to find areas prone to shearing defects.



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PMDA

When you define your material, a new button has been added to access the PMDA (Polymer Material Data Analytics).

Here you will find information about the selected material.

Viscosity Model

Cross Model

$$\eta = \frac{\alpha_T \, A}{1 + \left(\frac{\alpha_T A \dot{\gamma}}{\tau_o}\right)^{1-n}}$$

$A \equiv$ Consistency, $Pa \cdot s$
$\dot{\gamma} \equiv$ Equivalent strain rate, $1/s$
$n \equiv$ Exponent
$\tau_o \equiv$ Reference Shear stress, Pa

Item	Value	Units
Consistency	2.65132e+07	Pa.s
Exponent	0.238803	-
Maximum Strain Rate	100000	1/s
Minimum Strain Rate	1	1/s
Reference Shear Stress	127839	Pa

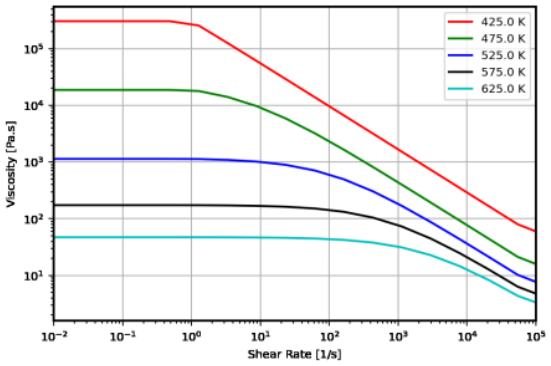
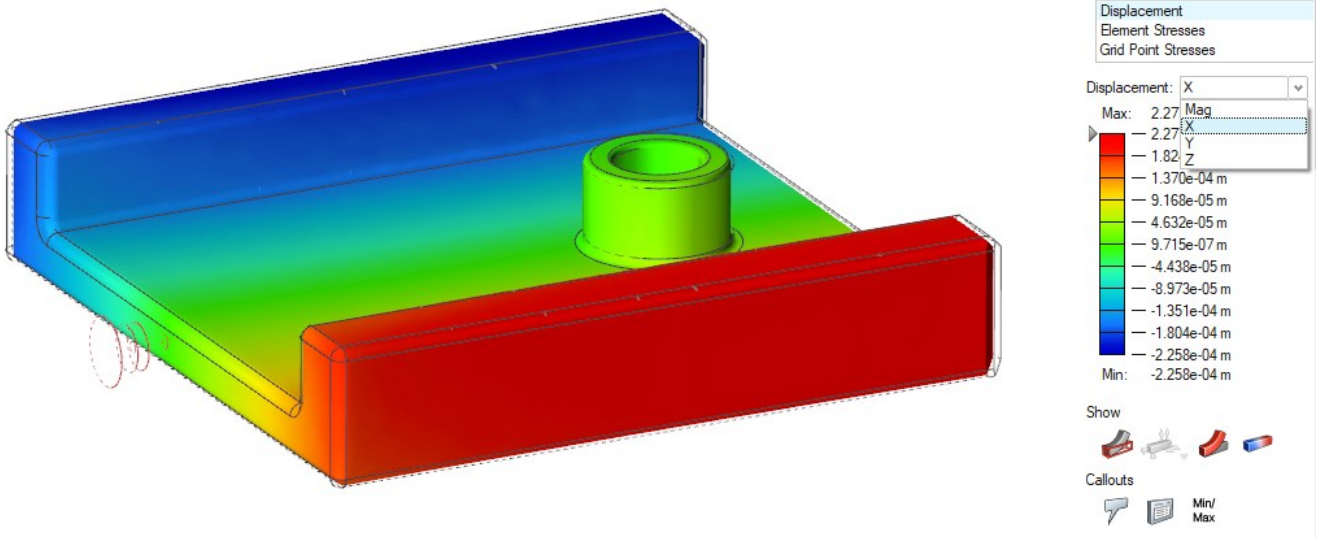


Figure 3: Polymers used for injection molding are shear-thinning polymers. The shear rate typically varies from 0 to 100,000 1/s. The viscosity of the polymer is a function of both temperature and shear rate. This figure shows the variation in viscosity as a function of shear rate at different temperatures.

X, Y, Z Components in Warpage Analysis



You can now isolate deformation in the X, Y, or Z directions.

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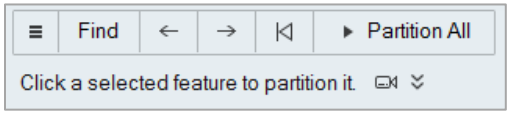
Learn More About Inspire

You can learn more about new and existing features in Inspire using the following resources:

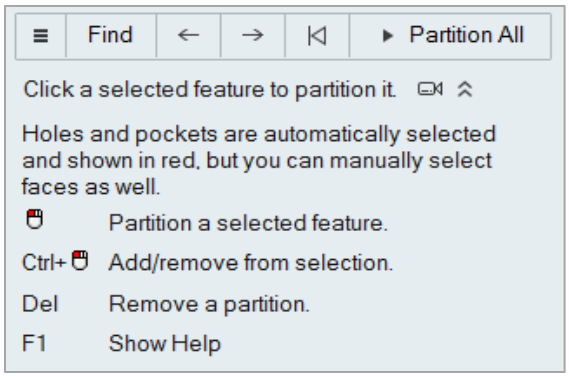
In-Application User Assistance

Inspire provides two types of user assistance. **Enhanced tooltips** appear when you hover over icons and other features. They describe what the tool does.

Workflow help appears when you select a tool that opens a guide bar or microdialog. The text prompts you what to do next.



Click to view additional tips and shortcuts. Some tools also include a video .



Online and Offline Help

Press **F1** or select **File > Help > Help** to view the online help.

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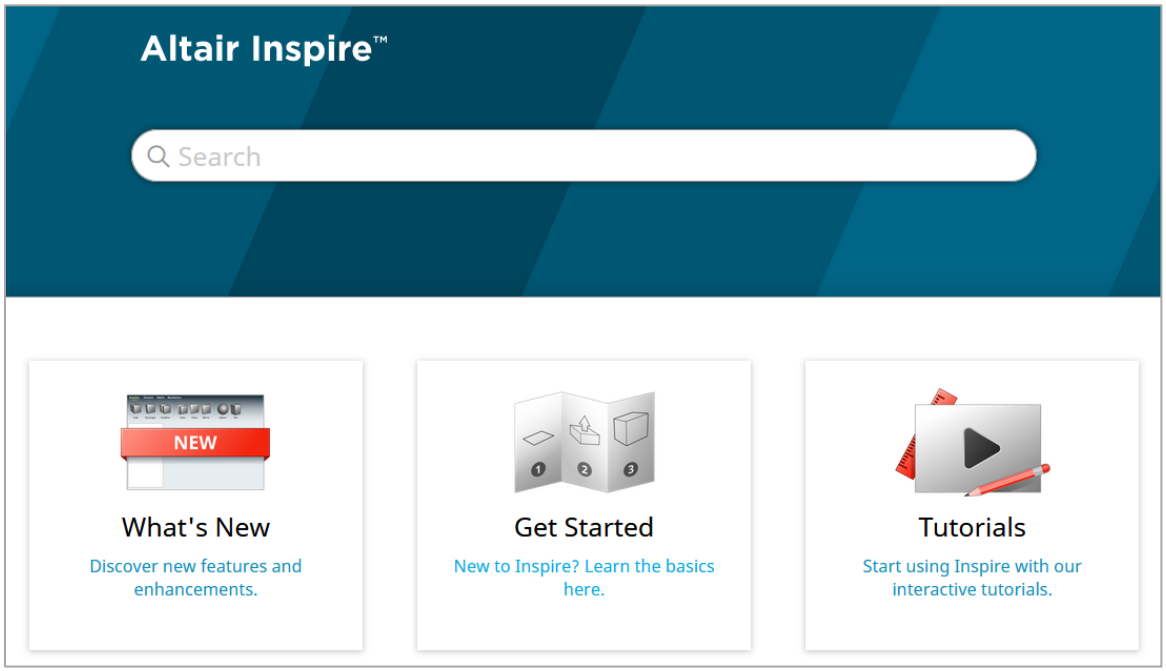
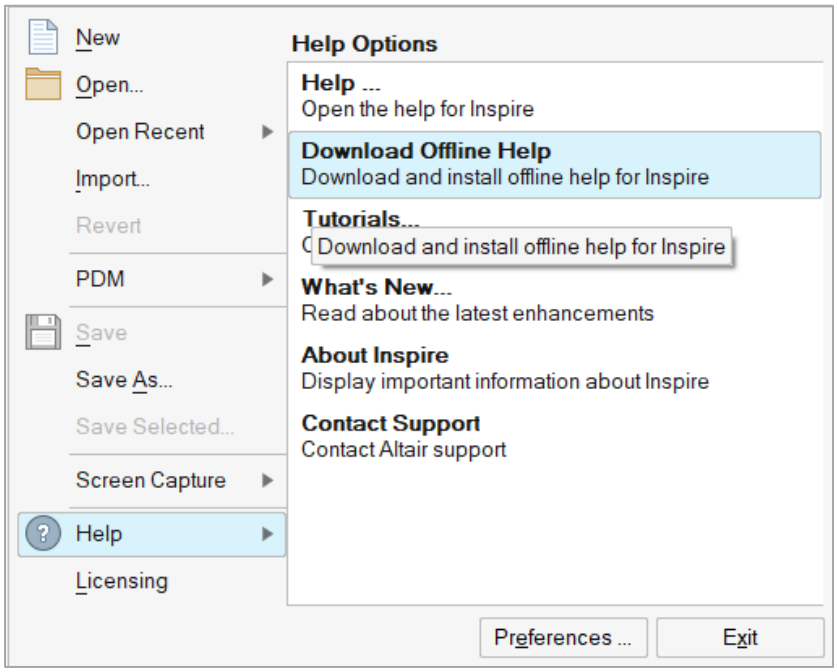


You can download an offline version by selecting **File > Help > Download Offline Help**. An internet connection is required to download.



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