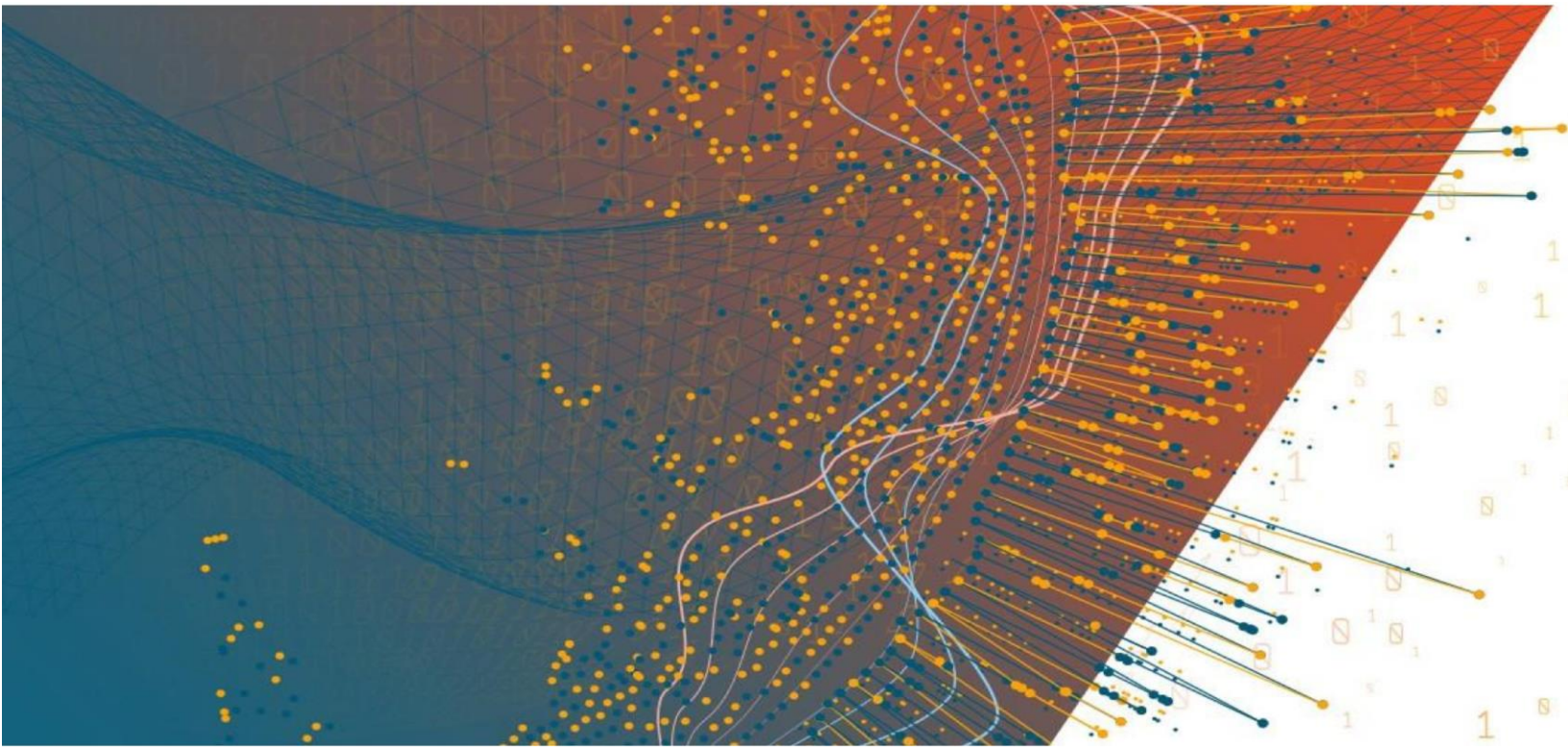


Altair® Inspire PolyFoam™ 2026

RELEASE NOTES

ENHANCEMENTS

Dispensing Ribbon

Curing Kinetics

We have enhanced the curing model for potting and dispensing. The simulation now better reflects how curing progresses depending on temperature and heating rate.

This means users will get more realistic predictions of the curing process, especially since thermoset materials usually need higher temperatures to cure properly.

For more information, see Material Properties and Curing Results in the help.

Two Domain Tait Model

We've added a two-domain Tait model to compute material density as a function of temperature and pressure.

The model covers both uncured and cured material states and includes PVT curves.

Many defects of the injection-molded products, such as inhomogeneous shrinkage, warpage, and sink marks, are related to the specific volume and affect both dimensional accuracy and long-term dimensional stability.

For more information, see Material Properties in the help.

Variable Air Temperature

In the Dispensing Ribbon's Process Parameters window, on the Advanced tab, there is a new Variable Air Temperature control. You can use this to set the air temperature at different times during the dispensing and curing process. This is helpful when working with materials that need certain temperatures to cure properly.

For more information, see Process Parameters in the Help.

Volumetric Shrinkage

We have added a new defect prediction result to the potting and dispensing simulation: the Shrinkage Defect Modulus.

Shrinkage is defined as the relative increase in material density from the end of filling until the part cools to ambient temperature. The result is expressed as a volume fraction. High shrinkage values may indicate risk of voids or sink marks as the product cools.

For more information, see Defects Results in the help.

New Dispensing Analysis Result Types

The Curing stage, along with the Curing Rate result type, is now added to the dispensing analysis. The Curing Rate result type gives insight into...

For more information about these new result types, see Dispensing Result Types in the Help.

Foaming Ribbon

Pouring Cup Update

You can now use the new Overflow Height field to change the height of the pouring cup's overflow region. This can help you to see how much the material expands if the foaming reaction fills the pouring cup's default overflow region.

For more information, see Pouring Cup Test in the help.

New Foaming Analysis Result Type

The new Collapse Defect Modulus result type is now added to the Defect stage of the foaming analysis results. This new result type gives insight into the balance between the blowing and gelling reactions in the material. This result appears only when a collapse defect is likely.

For more information, see Defects Results in the help.

General Enhancements

Nozzle Tool Update

PolyFoam's Nozzle tool now includes a squared nozzle option in both the foaming ribbon and the dispensing ribbon. Squared nozzles can yield better mixing, coverage, and control compared to a round nozzle. Note that squared nozzles do not support the nozzle path option.

For more information, see Add/Edit Nozzles in the help.

Remote Jobs Submission

You can now run PolyFoam analyses on a remote server, which leaves your local computer's processor free to accomplish other tasks while the analysis runs.

For more information, see Run Options in the help.

Materials Data Included in Shared Files

Materials data is now included in shared .ipfm files. This will save collaboration time when sharing model files with colleagues.

Optimized Calculation for Moving Parts

By optimizing the motion tracking algorithm for moving parts, running time has been improved by approximately 40%.

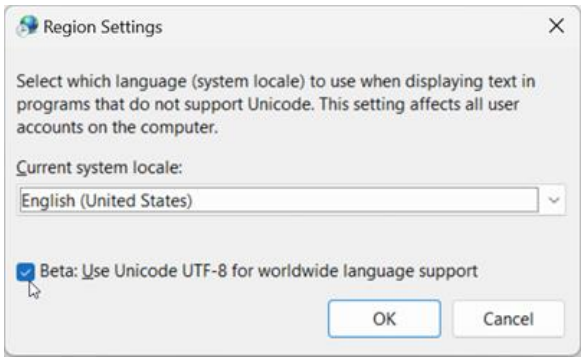
Overflow as a Vent

When using moving parts, the use of overflow is recommended. Because overflow is naturally connected to the outside air, a feature has been added that treats it as a vent during analysis, allowing internal air to escape.

KNOWN ISSUES

The following known issues will be addressed in a future release:

- As of October 14, 2025, Microsoft Windows 10 reached its end of support. Following Microsoft's messaging, all Altair 2026 applications no longer support Windows 10. Altair is providing this information to help our customers accommodate this change. Altair 2026 supports the Windows 11 operating system, along with our other Linux-based operating systems. Please contact your local Altair support teams if you have any questions or concerns.
- Windows does not support Unicode characters in folder names by default. When using a run folder that contains Unicode characters, please enable **Beta: Use Unicode UTF-8 for worldwide language support** in the Windows system locale settings.
    - Select Start →Settings.
    - In Settings, select **Time & language**.
    - Select Language & region.
    - Select Administrative language settings.
    - Click Change system locale.
    - Select the Beta: Use Unicode UTF-8 for worldwide language support checkbox.



- MOTION - Certain boundary entities such as grounded Pin and structural support are hidden when leaving the Review Flexible Body Results context [INSPIRE-35999]

- MOTION - Combined motion load case is missing in re-analysis results for optimization from motion loads [INSPIRE 48809]