Autodesk® Moldflow® Insight 2012

AMI Birefringence Analysis Results

Autodesk®

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Birefringence analysis results 1

This help topic specifies the results for a Birefringence analysis.

All birefringence results are produced from a 3D Warp analysis.

Graphical results

The following table lists the graphical Birefringence results that are created for a Warp analysis.

- 3D

For more information about a result, including how to interpret the display, click on the result name.

Result	Available for mesh type
Change in refractive index after warpage	
Retardation for light	
Phase shift for light	

Birefringence analysis results

You can produce birefringence results from a 3D Warp analysis.

Creating a custom plot—birefringence

The default birefringence results show stress-optical effects for light coming from one of two global axial directions (+Z, -Z) and for light of a fixed wavelength (546.1 nm).

If these choices are inadequate (for instance, your model is oriented so that the important optical direction is a different axis), you can create a custom plot showing results for light originating from any other direction and of any wavelength.

NOTE: This plot is available only if you have selected the **Birefringence analysis if material data includes optical properties** checkbox in the Fill+Pack page of the process settings wizard and the material has measured optical properties.

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1 Define a local coordinate system so that any one of the three cardinal axes (X, Y, or Z) is pointing *towards* the direction *from* which the light is coming.

2 Click (**Results tab > Plots panel > New Plot**) and select **Custom** from the drop down list.

3 Select **Birefringence** from the **Create Custom Plot** pane.

4 Enter a name for the plot in the **Plot Name** text box.

5 Select the local coordinate system and the axis which points towards the light source.

6 Choose one of the three plot types **Phase shift**, **Retardation** or **Retardance tensor**. For **Phase shift**, enter a wavelength.

7 Click **OK**.

The plot is displayed and the plot name is listed in the **Study Tasks** pane under **User-Defined Plots**.

Exporting birefringence results to Code V

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Code V® is an optical analysis program from Optical Research Associates®, which can simulate the appearance of an image seen through a lens.

You can export the optical properties of a lens analyzed with a Fill + Pack + Warp analysis to Code V, and investigate how the molding process affects the optical properties of the lens.