

## COMPANY

**Asahi Kasei Plastics**

## CITY

**Fowlerville, Michigan, USA**

## SOFTWARE

**Autodesk® Moldflow®**

# Detailed Material Characteristics through Cloud Computing

Subscription based cloud analysis allows Asahi Kasei Plastics to provide individualized mold analysis to customer components more accurately and with less waste

The number one reason we use Autodesk Moldflow is to help customers understand shrinkage and warpage, because the majority of the materials we produce are filled materials. They are more difficult for the customer to predict how they will behave.

—**Don Kosheba**  
Technical Services Manager,  
Asahi Kasei Plastics



Image courtesy of Asahi Kasei Plastics

Asahi Kasei Plastics manufactures high performance plastic compounds for OEMs and tier suppliers around the globe.

Technology is the tool for innovation for Asahi Kasei Plastics, advancing today's world by making it safer, cleaner and more comfortable for tomorrow's generations. Primarily manufacturing high performance plastic compounds for OEMs and tier supplies around the globe, their materials can also be found in your home, on the road, in the office and even on drinking fountains. Having manufacturing and support facilities across the globe, AK Plastics prides itself on a high level of personal service and guaranteed product uniformity.

Asahi Kasei Plastics uses Autodesk Moldflow Insight to help visually represent where problems occur for their customers and how to avoid them. Since most materials provided are filled, helping customers understand shrinkage and warpage is key to an ongoing successful relationship.

## The Challenge

As a resin provider primarily dealing with fiberglass filled materials, Asahi Kasei Plastics needs to be able to work directly with the mold makers and end customers to help them understand material characteristics and to avoid or redesign around potential problems in a design as early in the design cycle as possible. The key to this is to be able to provide accurate behavior of all materials provided and to help the customer visualize what

is happening both in the mold as well as with the shrinkage and warpage of the parts being created.

"Moldflow is a tool we use to help customers solve technical problems. We use it to show them visually where problems occur and how to avoid them. The interior of a molded part is hard to explain without visualization," said Mr. Kosheba.

The process of characterizing each material can be a time consuming and costly one. Taking into account the 100+ customer projects from one engineer performed yearly increases the cost exponentially. Being able to analyze multiple customer designs, each with a number of design scenarios, while keeping both hardware and software costs down is a challenge. Traditional desktop based perpetual licensing doesn't provide a scalable solution for a growing plastics company.

## The Solution

The Autodesk Moldflow Insight subscription offering has provided a low cost of entry for plastics providers. This has allowed Asahi Kasei Plastics to continue to provide a top level of support to their customers by not only showing how different materials will perform, but by visually demonstrating scenarios by providing Moldflow communicator files for them to explore. These files can also then be shared with mold makers before cutting steel begins, helping to avoid costly mistakes from the start of the design process.

Included in the subscriptions packaging, cloud based meshing and solving options have helped to reduce upfront and ongoing hardware costs. Instead of being tied to a high end desktop, an engineering laptop can now be used, taking advantage of the powerful processors the cloud provides for meshing and analyzing.



Image courtesy of Asahi Kasei Plastics

## The Result

Adopting the Moldflow cloud solutions in 2011 provided Asahi with an affordable solution that fit their needs, and has helped them to expand to now use multiple seats of Autodesk Moldflow Insight and Synergy.

The ability to mesh and solve in the cloud has allowed Asahi to continue to provide top of the line service to their customers throughout the design process, starting with running analyses for prototyping of the part and mold, followed by verifying tool data and optimizing gates and venting, and then providing the final mold design. To go a step further, after the customer starts production Asahi performs a validation analysis of the physical part versus the Moldflow data, which is almost always exact.

“I always want to do my next simulation better. To do this, you have to understand what might have gone wrong in the past,” explains Mr. Kosheba.

Being able to continue to provide this level of information to the customer before the mold is created or to help explain why parts aren't being produced as expected without effecting their bottom line has not only helped Asahi Kasei Plastics to build a stronger relationship with their customers, but has help to open new doors further down the road for additional sales.



Image courtesy of Asahi Kasei Plastics

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—**Don Kosheba**  
Senior CAE Engineer,  
Technical Services Manager  
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