Autodesk®
Moldflow® Adviser

Design plastics confidently.
Discovery, communicate, and resolve potential manufacturing defects earlier in the product development cycle with Autodesk Moldflow Adviser software.
Validate and optimize plastic parts and injection molds.

**Plastic Flow Simulation**
Simulate the flow of melted plastic to help optimize part and mold designs, reduce potential part defects, and improve the molding process.

**Part Defects**
Determine potential part defects, such as weld lines, air traps, and sink marks, and then rework designs to help avoid these problems.

**Thermoplastic Filling**
Simulate the filling phase of the thermoplastic injection molding process to help predict the flow of melted plastic and fill mold cavities uniformly; avoid short shots; and eliminate, minimize, or reposition weld lines and air traps.

**Feed System Simulation**
Model and optimize hot and cold runner systems and gating configurations. Improve part surfaces, minimize part warpage, and reduce cycle times.

**Gate Location**
Identify up to 10 gate locations simultaneously. Minimize injection pressure and exclude specific areas when determining gate location.

**Runner Design Wizard**
Create feed systems based on inputs for layout, size, and type of components, such as sprue, runners, and gates.

**Balancing Runners**
Balance runner systems of single-cavity, multicavity, and family mold layouts so parts fill simultaneously, reducing stress levels and volume of material.

**Thermoplastic Packing**
Optimize packing profiles and visualize magnitude and distribution of volumetric shrinkage to help minimize part warpage and reduce defects, such as sink marks.

**Hot Runner Systems**
Model hot runner system components.
Mold Cooling Simulation
Improve cooling system efficiency, minimize part warpage, achieve smooth surfaces, and reduce cycle times.

Cooling Component Modeling
Analyze the mold’s cooling system efficiency. Model cooling circuits, baffles, and bubblers.

Cooling System Analysis
Optimize mold and cooling circuit designs to help achieve uniform part cooling, minimize cycle times, reduce part warpage, and decrease manufacturing costs.

Shrinkage & Warpage Simulation
Evaluate part and mold designs to help control shrinkage and warpage.

Shrinkage
Meet part tolerances by predicting part shrinkage based on processing parameters and grade-specific material data.

Warpage
Predict warpage resulting from process-induced stresses. Identify where warpage might occur and optimize part and mold design, material choice, and processing parameters to help control part deformation.

Fiber Orientation
Control fiber orientation within plastics to help reduce part shrinkage and warpage across the molded part.

CAE Data Exchange
Validate and optimize plastic part designs using tools to exchange data with structural simulation software. CAE data exchange is available with Autodesk® Algor® Simulation, ANSYS®, and Abaqus® structural simulation software to account for the effects of processing on the performance of fiber-filled, injection-molded plastic parts when subjected to service loading.
CAD Interoperability and Meshing

Use tools for native CAD model translation and optimization. Get geometry support for thin-walled parts and thick and solid applications. Select mesh type based on desired simulation accuracy and solution time.

**CAD Solid Models**
Import and mesh solid geometry from Parasolid®, based CAD systems, Autodesk® Inventor® software, CATIA® V5, Pro/ENGINEER®, and SolidWorks®, as well as IGES and STEP universal files.

**Error Checking and Repair**
Scan imported geometry and automatically fix defects that can occur when translating the model from CAD software.

**Centerline Import/Export**
Import and export feed system and cooling channel centerlines from and to CAD software to help decrease modeling time and avoid runner and cooling channel modeling errors.

**Autodesk® Moldflow® CAD Doctor**
Check, correct, heal, and simplify solid models imported from 3D CAD systems to prepare for simulation.

**3D Simulations**
Perform 3D simulations on complex geometry using a solid, tetrahedral, finite element mesh technique. Ideal for electrical connectors, thick structural components, and geometries with thickness variations.

**Dual Domain Technology**
Simulate solid models of thin-walled parts using Dual Domain™ technology. Work directly from 3D solid CAD models, leading to easier analysis of design iterations.
Visualize and evaluate simulation results, and use the automatic reporting tools to share the results with stakeholders. Take advantage of features such as a materials database and a cost adviser to further boost productivity.

**Results Interpretation & Presentation**
Use results-specific design advice to find a quick path from problem to solution and then document the solution.

**Results Adviser**
Query regions of a model to identify primary causes of short shots and poor part or cooling quality. Get suggestions on how to correct the part, mold, or process.

**Automatic Reporting Tools**
Use the Report Generation Wizard to create web-based reports. Prepare and share simulation results more quickly and easily with customers, vendors, and team members.

**Microsoft® Office**
Export results and images for use in Microsoft® Word reports and PowerPoint® presentations.

**Autodesk® Moldflow® Communicator**
Collaborate with manufacturing personnel, procurement engineers, suppliers, and external customers using Autodesk® Moldflow® Communicator software. The Autodesk Moldflow Communicator results viewer enables you to export results from Autodesk Moldflow software so stakeholders can more easily visualize, quantify, and compare simulation results.

**Autodesk® Moldflow® Plastics Labs**
Get state-of-the-art plastic material testing services, expert data-fitting services, and extensive material databases.

**Productivity Tools**
Use dynamic help and a cost adviser to boost productivity.

**Dynamic Help**
Get context-sensitive help on a results plot, including information on what to look for and how to correct typical problems. Learn more about solver theory, interpreting simulation results, and designing better plastic parts and injection molds.

**Material Data**
Improve simulation accuracy with precise material data.

**Materials Database**
Use the built-in materials database of grade-specific information on more than 8,000 plastic materials characterized for use in plastic injection molding simulation.

**Cost Adviser**
Learn what drives part costs in order to help minimize those costs. Estimate product costs based on material choice, cycle time, post-molding operations, and fixed costs.
Digital Prototyping for the Manufacturing Market

Autodesk is a world-leading supplier of engineering software, providing companies with tools to experience their ideas before they are real. By putting powerful Digital Prototyping technology within the reach of mainstream manufacturers, Autodesk is changing the way manufacturers think about their design processes and is helping them create more productive workflows. The Autodesk approach to Digital Prototyping is unique in that it is scalable, attainable, and cost-effective, which allows a broader group of manufacturers to realize the benefits with minimal disruption to existing workflows, and provides the most straightforward path to creating and maintaining a single digital model in a multidisciplinary engineering environment.

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