SEACAD

Focused, Proven, Credible.

SOLIDWORKS Plastics

	SOLIDWORKS PLASTICS STANDARD	SOLIDWORKS PLASTICS PROFESSIONAL	SOLIDWORKS PLASTICS PREMIUM
4000+ Plastic Base Materials	✓	✓	✓
Filling Phase Simulation (1st Stage)	✓	✓	✓
Weld Lines	✓	✓	✓
Sink Marks	✓	✓	✓
Short Shots	✓	✓	✓
Air Traps	✓	✓	✓
Automatic Gate Locations	✓	✓	✓
Multiple Gate Locations	✓	✓	✓
Surface and Solid Mesh	✓	✓	✓
Packing Phase Simulation (2nd Stage)		✓	✓
Volumetric Shrinkage		✓	✓
Gas Injection and Valve Gates		✓	✓
Multiple Cavity		✓	✓
Runner Balancing		✓	✓
Runner Design Wizard		✓	✓
Hot and Cold Runner		✓	✓
Multicavity and Family Mold		✓	✓
Co-Injection		✓	✓
Insert and Over Molding		✓	✓
Gas-Assist		✓	✓
Fiber Analysis and Birefringence		✓	✓
Reaction Injection Molding (RIM:Thermoset)		✓	✓
Valve Gate (Sequential)		✓	✓
Venting Analysis		✓	✓
Cooling Analysis			✓
Warpage Analysis			✓

Filling Phase Simulation
Simulate the filling stage and generate different result plots to get insight of manufacturability.

Weld Lines
Identify potential structural weaknesses, where two melt fronts meet again.

Sink Marks
Identify potential sink marks at thicker sections, or at locations above ribs, bosses, and internal fillets.

Short Shots
Visualize how far the flow front will reach, under pressure loss and insufficient filling.

Air Traps
Visualize regions where the air will be pushed to and provide a corresponding ventilation. By relocating the gate(s) or redesigning your part, you are able to guide the Airtraps to a desired venting location.

Automatic Gate Locations
Defines up to 10 injection locations on the part cavity automatically. SOLIDWORKS Plastics adds injection locations onto the part based on the geometry and optimized balanced fill pattern.

Multiple Gate Locations
Evaluate multiple injection locations in an early stage of product development where you can flexibly change the location and the amount of gates.

Volumetric Shrinkage
Identify potential issues with material shrinkage due to temperature change.

Gas Injections and Valve Gates
Simulate GID method, where it first fills the cavity with molten plastic, then gas is blown into the core to hollow it out.
Control your injection locations with Valve Gates volume or time-based. With the use of gate valves, you can realize cascade filling, relocate weld lines or avoid air traps.

Multiple Cavity
Simulate two or more equal or unequal cavities in a single tool. Understand the efficiency of producing different or multiple parts using a single mold.

Runner Balancing
Can iteratively calculate the optimal sprue diameter for a uniform filling pattern.

Runner Design Wizard
Automates the process of creating common flow control devices and components such as sprues, runners, and gates.

Hot and Cold Runner
Hot runners are initially filled with hot polymer at the start of the filling simulation

Multicavity and Family Mold
Former simulates multiple cavities of the same part in the same mold and later simulates a set of different cavities parts in the same mold

Co-Injection
Two components are injected through the same gate with the Co-Injection method. The first component determines the skin material, the second to determines the core material.

Insert and Over Molding
Evaluate your inserts overmolding (made of metal or any other solid material). When Overmolding, also known as 2-component injection molding, two different cavities are filled sequentially.

Fiber Analysis and Birefringence
Simulate injection molding with fibers in the injected plastics. The fiber orientation can be visualized both in the core and the outer skin.
Birefringence is the optical property of a material having a refractive index that depends on the polarization and propagation direction of light. SolidWorks Plastics calculates values in all three planes, providing you with information about the property of birefringence of transparent plastic.

Reaction Injection Molding (RIM:Thermoset)
Processing technique for the formation of polymer parts by direct polymerization in the mold through a mixing activated reaction

Venting Analysis
Analyze the necessity of having air vents and simulate the effects of including venting holes in the mold.

Cooling Analysis
Estimate how long your part needs to cool down to the ejection temperature. Visualize where your part solidifies quickly and where it takes a longer duration. You will also be able to see how long it takes until your gate is solidified with the powerful visualization tools and determine the optimal duration of packing time.

Warpage Analysis
Predicts the final shape and dimensions of the part, after it has been ejected and fully cooled.

SEACAD SINGAPORE

SEACAD Technologies Pte Ltd
28 Genting Lane
#08-04/05 Platinum 28
Singapore 349585
www.seacadtech.com

Sales Enquiry
Tel: +65 6372 1416
Fax: +65 6372 1215
Email: sales@seacadtech.com

Support
Tel: +65 6226 3784
Email: support@seacadtech.com

SEACAD INDONESIA

PT. SEACAD Technologies Indonesia
Komplek Ruko Orchard Park Block C No. 16
Jl. Orchard Boulevard, Belian, Batam Kota,
Kota Batam, Kepulauan Riau 29444, Indonesia
www.seacadtech.co.id

Sales Enquiry
Tel: +62 778 4162 800
Email: sales@seacadtech.co.id

Support
Tel: +62 778 4162 800
Email: support@seacadtech.co.id