Autodesk® Moldflow® Insight

Certification Process

Autodesk has three levels of certification, all building on each other. The certification is for Autodesk Moldflow Insight. The levels of certification include:

- Associate (formerly Bronze)
- Professional (formerly Silver)
- Expert (formerly Gold)

All the certification levels require a high level of knowledge, not only of using Moldflow, but injection molding, part design and mold design. The required procedure and information necessary for the exams is described below.

Associate Certification

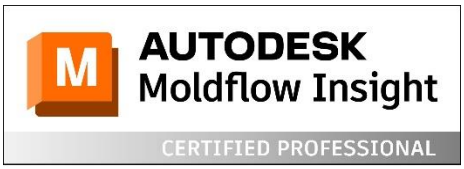
To properly prepare to become Associate certified, users should attend the proper training classes. For new and existing Autodesk Moldflow Insight users who have not been to a formal training class in two years, users should review the **Autodesk Moldflow Insight Fundamentals** manuals. The manuals are available at Ascent. The questions on the exam are based primarily on the **Theory and Concepts** section of the training material. Topics are related to filling and packing and include:

- Analysis workflow
- Feed systems
- Gate location design guidelines
- General product design
- General tool design
- Injection molding process
- Materials
- Model preparation
- Moldflow design principles
- Molding Window
- Results interpretation

To be successful with this exam, take the time to review the training material listed above and use Autodesk Moldflow Insight on several projects before taking the exam, using the principles and guidelines outlined in the training material. The exam consists of 60 multiple-choice questions on the topics described above and typically takes **1-2 hours**. Passing the exam requires a score of 80% or greater. The exam uses the following:

- Adobe Acrobat Reader to view the questions
- Microsoft© Excel to place answers in a spreadsheet provided

Professional Certification



Autodesk Moldflow Insight users must be Associate certified, plus users must complete the classes **Autodesk Moldflow Insight**, **Advanced Flow** and **Autodesk Moldflow Insight Advanced Cool and Warp**. You can also study on your own. The manuals are available at Ascent . The questions on the exam are based primarily on the **Theory and Concepts** section of the training material. Topics are related to filling, packing, cooling, warpage, and include:

- Anchor plane usage
- Cooling analysis overview and theory
- Cooling analysis results interpretation
- Cooling analysis strategies and optimization
- Cooling component modeling
- Core shift analysis
- Database management
- Design influences on warpage
- Determine the warpage magnitude
- Determine warpage cause
- Design of Experiments
- Family tools
- Fiber flow analysis
- Multiple gates
- Packing optimization
- Reducing warpage
- Results interpretation
- Two-shot sequential overmolding
- Warpage analysis process

To be successful with this exam, take the time to review the training material listed above and use Autodesk Moldflow Insight on several projects before taking the exam, using the principles and guidelines outlined in the training material.

The exam includes a theoretical portion and a practical portion. The theoretical portion consists of multiple-choice questions on the topics described above. The practical portion has multiple choice questions related to issues and procedures necessary to set up an analysis, set anchor planes and review results. The exam takes typically **8-10 hours** to finish.

The exam uses the following:

- Adobe Acrobat Reader to view the questions
- Microsoft Excel to place answers in a spreadsheet provided
- Autodesk Moldflow Insight to create runners and a cooling system
- Autodesk Moldflow Insight/Moldflow Communicator to view results provided

Passing the exam requires a score of 80% or greater in the following four areas:

- Overall
- Section 2 Flow related questions
- Section 2 Cooling related questions
- Section 2 Warpage related questions

Expert Certification

Autodesk Moldflow Insight users must be Professional certified for at least one year to qualify to take the Expert exam. The exam consists of 3 sections including:

- Theoretical
- Practical
- Report

Theoretical

The theoretical exam has three sections:

- Mesh quality
- Workflow
- Results interpretation

Most of the questions are multiple choice. Choose the **best** answer for the question. Eight hours are given to complete the theoretical portion of the exam. The **Theoretical** exam is done first. Once the Theoretical part is sent back, the **Practical** exam is sent out.

Practical

The practical portion of the exam involves solving problems of a given part including Flow, Cool and Warp. There is a choice of parts, one midplane part, two Dual Domain parts, and one 3D part. The parts are meshed for you, and you are not expected to revise the mesh. Each part has its associated information on what can and cannot be changed and some initial design assumptions and guidelines. Work will focus on solving the warpage problem, given constraints for each part. There are a series of questions that relate to the workflow used to solve the warpage problems. The problems are open ended. In the time allotted, the warpage problems may not be solved however, there must be significant progress in determining the cause of the warpage problem (differential cooling, differential shrinkage, orientation effects, corner effects), the underlying reasons for the warpage, results used to diagnose the problems and the solution in solving the problem and/or eliminating possible solutions.

Questions on the project are divided into the following categories:

- Workflow used on the project, all studies analyzed must be documented and returned
- Gate location
- Processing conditions
- Feed system design
- Cooling

- Packing
- Determining the amount of warpage
- Determine the Cause of warpage
- Finding the solution to the warpage
- Project summary

The questions are multiple choice and fill in the blank. There are no right or wrong answers for the multiple choice questions. The questions relate to what and why you did things. For each category, the questions are evaluated, and a score is given for the category.
The exam uses the following:

- Adobe Acrobat Reader to view the questions
- Excel to fill in the answer sheets provided
- Autodesk Moldflow Insight for the analysis work
- Autodesk Moldflow Communicator to view results provided

Time required

The Expert exam is limited to 8 hours for the Theoretical portion and 16 hours for the Practical portion of the exam.

Report

Information about the report is as follows:

- The report is written in English. It can also be written in a second language but is graded in English.

- The report consists of:
    - Microsoft PowerPoint file
    - MFR files
- The report is based on work done in the previous year where molded parts are produced.
- In part, the report compares the simulation to the molded parts.
- The simulation work must include at a minimum:
    - Flow
    - Cool
    - Warp
- The report is written and submitted after the Theoretical and Practical sections have been taken and graded

PowerPoint file

Use the PowerPoint template provided as a guide. The PowerPoint report must include:

- Introduction
    - A project description
    - Problems to be investigated or solved
- Project workflow
    - Format of models imported
    - What programs were used to mesh the parts
    - Order of the problems and issues are addressed
    - Include at least the following:
        - Determining the gate locations
        - Determining the processing conditions
        - Optimizing the filling
        - Optimizing the cooling
        - Optimizing the warpage
    - Discuss results used to investigate the problems
    - Indicate the name of the MFR file that contains results discussed
    - Discuss how warpage is defined and evaluated
- Summary
    - Discuss how the simulation compared to the molded parts
    - Discuss what you learned doing the project
    - Discuss what you would do differently next time

MFR files

Create any number of MFR files that represent the issues discussed in the PowerPoint file. Include in the MFR file all the results necessary related to the issues. The result plots must have the properties set up for easy results interpretation.

Evaluation

The exam is evaluated and graded by the Moldflow Certification Committee. Passing the exam requires a score of 80% or greater. The portion of the final grade for each section is shown below.

- **Theoretical** portion worth 20% of the total grade
- **Practical** portion worth 60% of the total grade
- **Report** worth 20% of the total grade

Pre-tests

For both the Associate and Professional exams there is a pre-test. The pre-test covers all the areas covered on the Associate exam and section 1 of the Professional exam. If you want to take a pre-test contact MoldflowCertification@autodesk.com and indicate the pre-test you want to take. Once graded, feedback is provided on the questions missed.

Arranging to take a Moldflow certification exam

An exam can be taken within your region. Contact your local Autodesk Moldflow engineer or reseller. If you don't know who to contact e-mail MoldflowCertification@autodesk.com. Arrangements will be made for you to take the exam. The exams can be taken at any time agreed upon by the exam taker and the exam proctor. At least a week notice is required to set up the exam. All exams will be distributed from Autodesk Certification team to the proctor and will be sent to the certification team for grading. Feedback is provided for each exam explaining issues involved on the questions missed.

In the USA exams are proctored 5 days a month. Future exams are proctored the days of:

2025

- January 6 - 10
- February 3 - 7
- March 3 - 7
- April 7 - 11
- May 5 - 9
- June 2 – 6
- September 1 - 5
- October 6 - 10
- November 3 - 7
- December 1 – 5

Exams are graded starting the week following the exam.

If you have any questions, please contact: MoldflowCertification@autodesk.com