

ASA Hose Adapter / Finding Where the Print Time Went

3DP-ASA-HOSE-001 / REV A / 2026.10.10

I wanted a practical ASA profile for a hose adapter on the Creator 5 Pro, using a 0.4 mm nozzle in Flash Studio Desktop. The conservative starting settings made the estimate much longer than expected. The useful part of this experiment became finding which operations consumed the time, changing those settings, and checking the next slice. The documented result stops at a 6 h 19 min estimate. The later 0.16 mm proposal still needs a slice and a physical test; no completed adapter or pressure capability is claimed here.

STATUS	SLICER TRIAL / PRINT TEST PENDING
CLASSIFICATION	3DP
MATERIAL	OVERTURE ASA / CREATOR 5 PRO
DISPOSITION	PUBLIC CASE STUDY / PROCESS NOTES
CATEGORY	3D Printing
RECORD TYPE	case-study

TECHNICAL NOTES

A functional garden-hose adapter turned a three-hour estimate into nine hours. Reading the slicer's time breakdown led to a six-hour estimate and a proposed change from 0.12 to 0.16 mm layers.

GOAL

Reduce the hose adapter's estimated print time while keeping its thread fit, wall integrity, and eventual water-use checks as explicit requirements.

BUILD STORY

This is a record of slicer tuning before a print. The settings discussed were experiments for this model and material, not a validated ASA profile or a certified hose fitting.

The starting request fixed two variables: a 0.4 mm nozzle and 0.12 mm layers. I identified the printer as a Creator 5 Pro and the slicer as Flash Studio Desktop. Once the material and use were clarified as Overture ASA and a garden hose, the proposed starting profile favored a dense part with six walls and 100% infill. Those were trial settings, not evidence that the adapter could hold pressure.

The time estimate immediately changed the conversation. I reported that a roughly three-hour print had become a nine-hour print. The reviewed breakdown put about 5 h 14 min into inner walls and 2 h 16 min into outer walls, with less than ten minutes in supports. That made wall paths the first place to investigate. Removing the one supported area would not address most of the delay.

The next proposal increased the wall and infill speeds and reduced the small-perimeter threshold from 10 to 5 mm while keeping 0.12 mm layers, six walls, and 100% infill for comparison. OrcaSlicer's documentation explains why the threshold matters: short perimeter paths can use a separate, slower speed. It also notes that actual speeds remain constrained by volumetric flow, motion limits, and acceleration. The revised values were a tuning trial, not a promise that the printer would reach every requested speed.

The next report was concrete progress in the slicer: the estimate had fallen to about six hours, with the reviewed total at 6 h 19 min. Walls still occupied about 4 h 09 min, and travel was nearly 54 minutes. This was a better estimate, not a finished six-hour print. The record has no measured runtime, extrusion result, or comparison of the printed threads.

I then clarified that the part was functional and that cosmetic finish was not a priority, so 0.16 mm layers became an acceptable next experiment. For the same height, that means approximately 25% fewer layers than 0.12 mm, but it does not guarantee a 25% shorter job. The discussion also proposed checking the Avoid crossing walls setting, which can add travel detours according to OrcaSlicer's documentation. A four-hour result was only a target; no follow-up slice established it.

The next useful record is a saved 0.16 mm slice with its full time breakdown, followed by a small representative print to check the threads, shoulder, support removal, and layer bonding. The adapter geometry and final slicer project still need to be attached. A hose connection also needs its sealing and water-use results documented separately. Nothing in the estimates establishes a pressure rating, and the current project remains an unvalidated prototype.

RESULT / WHERE THIS STANDS

The first tuning pass reduced the reported estimate from about nine hours to 6 h 19 min. The next proposed change was 0.16 mm layers. No final slice, successful print, actual elapsed time, or pressure test is documented.

NEXT TO ADD

- The adapter CAD/STL and its source or license information
- Saved slicer project or profile with the final settings and software version
- The 0.16 mm slice screenshot and full time breakdown
- A finished-print photo, actual elapsed print time, and notes on layer bonding and support removal
- Measured thread/washer fit and documented water-use test conditions and results; pressure capability remains unverified

SPECIFICATION

PRINTER	Flashforge Creator 5 Pro, as identified in the project discussion
SLICER	Flash Studio Desktop
MATERIAL AND NOZZLE	Overture ASA / 0.4 mm nozzle
INTENDED PART	Adapter for a garden hose carrying pressurized water
INITIAL LAYER HEIGHT	0.12 mm
FIRST REPORTED CHANGE	About 3 hours before the conservative profile; about 9 hours afterward
WALL-TIME DIAGNOSIS	Initial breakdown: approximately 5 h 14 min inner walls + 2 h 16 min outer walls
REVISED ESTIMATE	6 h 19 min after the first speed changes; estimated time, not elapsed print time
NEXT PROPOSED TRIAL	0.16 mm layers; no resulting slice recovered
PHYSICAL VALIDATION	No finished print, fit check, leak result, or pressure rating recorded

DEVELOPMENT HISTORY

2026.10.10 / START

Requested a 0.12 mm ASA profile for a Creator 5 Pro with a 0.4 mm nozzle; clarified Overture filament and garden-hose water service.

2026.10.10 / SLICE

Reported that the conservative profile increased the estimate from roughly three hours to nine hours. The review identified walls as the main time consumer.

2026.10.10 / REVISION

Reported an estimate down to about six hours after speed changes; the reviewed estimate was 6 h 19 min.

2026.10.10 / NEXT TRIAL

Accepted considering 0.16 mm layers because function mattered more than cosmetic finish. The conversation ended before a new slice or print result.

2026.10.10 / A

Published the tuning chronology with estimates separated from physical results and the outstanding checks listed explicitly.

RELEASED MATERIAL / SOURCE LINKS

OrcaSlicer speed settings

REFERENCE / WALL SPEEDS, SMALL PERIMETERS, AND SPEED LIMITS

https://github.com/OrcaSlicer/OrcaSlicer/wiki/speed_settings_other_layers_speed

OrcaSlicer wall and surface settings

REFERENCE / AVOID CROSSING WALLS AND TRAVEL DETOURS

https://github.com/OrcaSlicer/OrcaSlicer/wiki/quality_settings_wall_and_surfaces#avoid-crossing-walls

Overture ASA guidance

REFERENCE / MATERIAL MANUFACTURER'S CURRENT INSTRUCTIONS

<https://wiki.overture3d.com/en/Filament/ASA>

Prusa watertight-print guidance

REFERENCE / LEAK RESISTANCE IS A SEPARATE PRINTING CONCERN

https://help.prusa3d.com/article/watertight-prints_112324

3DP-ASA-HOSE-001-project-notes.txt

PROJECT NOTES / CURRENT RECORD + NEXT EVIDENCE

<https://u225x.com/downloads/project-notes/3DP-ASA-HOSE-001-project-notes.txt>

3DP-ASA-HOSE-001-report.pdf

PRINTABLE RECORD / PROJECT NOTES

<https://u225x.com/record/3DP-ASA-HOSE-001/pdf>

CONNECTED RECORDS

3DP-032

<https://u225x.com/record/3DP-032>

CHAT-0359

<https://u225x.com/record/CHAT-0359>

CHAT-0048

<https://u225x.com/record/CHAT-0048>

EXP-WATER-RELEASE-001

<https://u225x.com/record/EXP-WATER-RELEASE-001>

RETURN TO THE LIVING RECORD

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This PDF preserves the public notes at this revision. Visit the record for updates and attached images.

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