

ASA printing and enclosure needs

3DP-032 / REV A / 2026.09.01

ASA is useful for outdoor housings, covers, and fixtures because of its UV resistance and better heat tolerance than ordinary PLA. Its tendency to shrink while cooling makes enclosure conditions and bed adhesion central to success. Verify the installed enclosure and machine limits before selecting the profile. Let the enclosure stabilize using the normal bed preheat procedure. Keep extraction arranged so it does not blow cold air across the part. Provide ventilation appropriate for ASA emissions; an enclosure alone does not remove them. Orient and round large flat features to reduce concentrated corner stress where the design allows.

STATUS	Needs Retest
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CLASSIFICATION	3DP
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MATERIAL	3D PRINT / MAKER
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DISPOSITION	PUBLIC / NEEDS RETEST
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CATEGORY	3D Printing
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RECORD TYPE	project
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TECHNICAL NOTES

ASA is useful for outdoor housings, covers, and fixtures because of its UV resistance and better heat tolerance than ordinary PLA. Its tendency to shrink while cooling makes enclosure conditions and bed adhesion central to success.

GOAL

Run the first test described in this guide and record the result for asa printing and enclosure needs.

SOURCE STATE

Starting profile-awaiting Robert's retest

SETTINGS / STARTING POINT

NOZZLE / LAYER HEIGHT	0.4 / 0.20
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NOZZLE TEMPERATURE	255-260 if permitted by the spool
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BED	100-110 if supported by both printer and plate
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OUTER WALL / OTHER EXTRUSION	30-40 / 40-60
FIRST LAYER	20
PART COOLING	0% normally; small targeted increases only when required
WALLS / INFILL	4 walls, 20-35% for a functional test
ADHESION	Compatible treatment and an initial 8-12 mm brim for warp-prone geometry
ENCLOSURE	Warm, stable, draft-free environment within printer limits

PREPARATION / NOTES

Verify the installed enclosure and machine limits before selecting the profile. Let the enclosure stabilize using the normal bed preheat procedure. Keep extraction arranged so it does not blow cold air across the part. Provide ventilation appropriate for ASA emissions; an enclosure alone does not remove them. Orient and round large flat features to reduce concentrated corner stress where the design allows.

EQUIPMENT

- FDM printer / slicer
- Slicer project
- Calipers or inspection method

MATERIALS

- ASA

METHOD / STEPS

1. Confirm printer, nozzle, plate, and material identity.
2. Start from the recorded profile or the slicer default for that material.
3. Print a small first-layer and geometry test before the full part.
4. Inspect adhesion, dimensions, surface, supports, and failure mode.
5. Save the successful project with temperatures, speeds, and revision notes.

THINGS TO WATCH FOR

Lifted corners, horizontal splitting, or parts detaching indicate thermal or adhesion problems. More nozzle heat alone will not fix a cold chamber. Let the part cool gradually before opening the enclosure. Do not add unapproved heaters or cover cooling electronics to raise chamber temperature.

FIRST TEST / WHAT TO RECORD

A small flat rectangle with corners, followed by a taller sample to check layer splitting.

RESULT / WHERE THIS STANDS

A small flat rectangle with corners, followed by a taller sample to check layer splitting.

TROUBLESHOOTING

- Lifted corners, horizontal splitting, or parts detaching indicate thermal or adhesion problems. More nozzle heat alone will not fix a cold chamber. Let the part cool gradually before opening the enclosure. Do not add unapproved heaters or cover cooling electronics to raise chamber temperature.

SPECIFICATION

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DEVELOPMENT HISTORY

2026.09.01 / Rev A

Imported as an independent manifest record; public copy keeps uncertainty visible.

2026.10.10 / PROJECT UPDATE

Connected the newer project records: 3DP-ASA-HOSE-001. Existing test limitations remain in place.

REFERENCE NOTES

Prusa ASA guide (https://help.prusa3d.com/article/asa_1809). Exact heat resistance and temperature requirements depend on formulation and test conditions.

HOW-TO SOURCES

Prusa ASA guide

https://help.prusa3d.com/article/asa_1809

RELEASED MATERIAL / SOURCE LINKS

3dp-032-public-summary.txt

PUBLIC SUMMARY / RECOVERED NOTES

<https://u225x.com/downloads/manifest-records/3dp-032-public-summary.txt>

CONNECTED RECORDS

3DP-ASA-HOSE-001

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

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