

3D printing guide

Fillamentum Vinyl 303

(Polyvinyl chloride)

Printing temperature: 215–230 °C

Hotbed temperature: 80–90 °C

Speed: 40–60 mm/s

Part cooling fan: 0–50 %

Hotbed surface: PEI plate, mirror/glass

Adhesive: Magigoo, PVA based glue

Raft/skirt/brim: Brim 10 mm / raft

Heated chamber/enclosure: recommended

Adhesion – You can print Vinyl on standard PEI build plate. We recommend use brim, because Vinyl can shrink from build plate due to poorly cleaned build plate.

Cooling – for standard maximum part cooling fan speed is 15% from 10th layer. If you are printing difficult parts/models with overhangs and supports, you can go up to 100 %. Be careful with the part cooling fan speed – too much flow can decrease bonding of layers.

Printing – Printing bridges with Vinyl could be challenging, therefore, we recommend using supports as it really helps and avoids print fails.

- Stronger parts can be achieved by using temperature around 230 °C and part cooling fan off, where layers adhere more.
- Printing very small features is hard. It is recommended to avoid it in the models, because printing small detail can cause clogging due to small flow off material.

Storing – Airtight bag with desiccant.

Avoid clogging – First heat up the bed, after temperature stabilization heat up the nozzle.

- Nozzle temperature shouldn't be higher than 230 °C due to thermal sensitivity.
- Reduce material delay in the nozzle, at elevated temperatures keep feeding or set removing of filament immediately after printing is finished.
- The bed must be well calibrated – low level of nozzle may cause low flow and clogging.
- Clean the nozzle at the printing temperatures or lower – higher temperatures would cause clogging.
- Suitable material for cleaning nozzle is PLA Crystal Clear or Nylon FX256.
- Lowest recommended layer height is 0.15 mm.