

3D printing guide

Fishy Filaments' **OrCA**[®] by Fillamentum

(Recycled Polyamide 6 filled with recycled carbon fibers)

Printing temperature: 250–270 °C

Heated bed temperature: 80–110 °C

Speed: 30–50 mm/s

Part cooling fan: 0 %

Heated bed surface: LockPAd, mirror/glass, (PEI)

Adhesive: Magigoo PA, PVA glue

Raft/skirt/brim: Brim > 10mm, raft

Heated chamber/enclosure: recommended

Preparation – Recommended to predry the filament at 80°C overnight. Temperatures below 70°C are not effective for drying.

In-print filament delivery - We recommend delivery of the filament from a heated caddy or desiccator at 50°C to extend the printable life and increase print reliability

Adhesion – it is recommended to use large brim around the printed object. The best results were achieved with LockPAd and Garolite. Glass bed with PVA glue or Magigoo PA works fine. Although Nylons usually don't stick well to PEI, small rounded parts are possible to print on PEI.

Cooling – It's necessary to turn off the part cooling fan. Too high part cooling fan speed or too fast cooling of the printed object can lead to warping and shrinking.

Storing - Airtight bag with desiccant.

In case of moist material, re-dry it in appropriate device. The conditions to achieve optimal level of moisture are 80 °C for 5+ hours. Processing of moist filament may cause degradation of polymer chains, brittleness, poor layer adhesion, stringing, oozing etc.

Printed parts – If it's possible at construction, avoid sharp corners touching the build plate. It can increase the warping effect when printing nylon.

Nozzle – **Minimum size 0.6mm**, strongly recommend the use of hardened or wear resistant nozzles