



# LAURAMID® 3D

## PA12 FILAMENT



### PROCESSING RECOMMENDATIONS

PROPERTY	■ LAURAMID® 3D N01 (NATURAL)	□ LAURAMID® 3D C01 (CARBON FIBRE)
<b>Printing temperature:</b>	235-255 °C	245-265 °C
<b>Printing bed temperature:</b>	60-110 °C (depending on printing bed)	
<b>Printing bed material:</b>	PEI, glass, aluminium (> 90 °C), Lauramid (60 °C)	PEI, glass, aluminium (> 80°C), Lauramid (60 °C)
<b>Attachment</b>	Brim recommended Magigoo PA or Dimafix as adhesive A raft/brim made of VXL_111 is beneficial for large-scale parts	Smaller brim than required with natural filament Magigoo PA or Dimafix as adhesive
<b>Printing speed</b>	Up to 40 mm/s. (2.4-10 mm³/s) depending on nozzle diameter and layers Nozzle dia. 0.6 with layer 0.2 with approx. 4 mm³/s delivers very good results Increase temperature slightly if necessary	
<b>Nozzles</b>	Nozzles ≥ dia. 0.2 can be used.	Use coated or rubin nozzles for abrasive material Nozzles ≥ dia. 0.6, small parts possible with ≥ dia. 0.4 Large and solid parts ≥ dia. 0.8 mm recommended
<b>Component cooling</b>	Do not use component cooling. Exception: Component cooling may have a positive effect when dealing with small elements/parts with short layer times	
<b>Retract</b>	Bowden 6-13 mm, Directdrive 2.5-5 mm Coasting and wipe nozzle (outline) beneficial	Bowden 5-11 mm, Directdrive 2-4.5 mm Coasting and wipe nozzle (outline) beneficial
<b>Shrinkage</b>	Polyamide 12 exhibits greater shrinkage because of its higher crystalline content Pay attention to thermal shrinkage Scaling + X-Y 0.3-0.5 %, Z 0.8-2.4 % (depending on layer height/time)	The shrinkage is slightly less than with the natural variant because of the fibre content Can be ignored in X-Y when dealing with smaller parts Scaling + X-Y 0-0.5 %, Z 0.8-1.8 % (depending on layer height/time)
<b>Support material</b>	VXL 111 attaches very well to Lauramid® 3D. (cleaning solution required). For removing the component, it may help to heat the platform to > 110 °C again	
<b>Component geometry</b>	Avoid sharp corners. Thick, thin-walled projections tend to warp Add chamfers and radii to transitions This has a positive effect on the component strength	The fibre content reduces warping Sharp corners should be avoided Add chamfers and radii to transitions This has a positive effect on the component strength
<b>Filament storage</b>	Store dry Use directly from dry box recommended Material with a high moisture content results in adverse effects and interferes with the printing process Dry moist material in a convection oven for at least 24 hours at 70-80 °C	
<b>Miscellaneous</b>	Infill before outline and "Retract before outer line/shell" reduces blobs/Z-Scar	