

PA 680

Nylon 680

This engineering-grade nylon has been specially designed for FFF 3D printing, can be printed at slightly lower temperatures than other nylon filaments, and is capable of withstanding ethylene oxide and flash steam sterilization processes. Now you can 3D print your medical, dental, or food processing prototypes with a durable, high strength material that can withstand your rigorous applications testing. While this Nylon's base ingredient is FDA approved as a food and beverage rated material, the process of 3D printing with the material would require further testing and submission to claim FDA approval. This material is manufactured in the USA.

Mechanical Properties	Standard	Value	Unit
Ultimate Tensile Strength		47.5	MPa
Tensile Modulus			MPa
Elongation at Break		34	%
Flexural Strength			MPa
Flexural Modulus			MPa
Hardness Shore	Standard	Value	Unit
Hardness			

Thermal Properties	Standard	Value	Unit
HDT @ 0.45 MPa			°C
Glass Transition Temp		93	°C
Physical Properties	Standard	Value	Unit
Density		1.12	g/cm ³
Certifications and Tests	Standard	Value	Unit
Flammability (UL 94)		HB	
Flammability (UL 94)	@ 1.5mm	V-2	

Characteristics

- Semi-flexible
- Impact Resistant
- Fatigue Resistant
- Semi-flexible
- Impact Resistant
- Fatigue Resistant
- Does not shrink as much as traditional nylons
- Extrudes at a lower temperature than other nylons

Applications

- Prosthesis
- Medical jigs and fixtures
- Gears
- Chemical dip and tank support
- Chemical resistant equipment covers
- Electroplating supports and hangers
- High end gears and cams
- Industrial vibration isolators and damping parts
- Large motor mounting
- Prosthetics
- Pulleys
- Mounts and brackets for machines
- Sand Blast Masking

Considerations

Printing Skill & Experience: Beginner Intermediate Advanced Expert

Printer Compatibility

<input type="checkbox"/> 3ntr A2v4	<input type="checkbox"/> 3ntr A4v4	<input checked="" type="checkbox"/> EVO-T	<input checked="" type="checkbox"/> EVO22-T
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Available colors from [Airwolf 3D](#): Natural