

## PA 4000

### Overview

A very durable nylon powder, PA 4000 has well-balanced material characteristics that are ideal for a wide variety of applications. The detail resolution, excellent surface finish, and 34% elongation at break ensures this bright white material meets your product requirements. The chemical resistance and various finishing possibilities make PA 4000 ideal for open-sourced laser sintering 3D printers.

Similar to a PA 12, PA 4000 P should be selected for applications that require functional testing, low to mid-volume production runs or prototyping. Even though this material should be processed in an inert environment, PA 4000 does not need to be dried prior to processing which adds to the convenience of use.



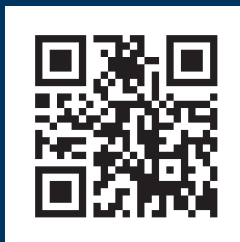
### Applications:

- Functional prototypes
- Complex geometries
- Low temperature duct work
- Caster housings
- Housings and enclosures
- Parts with snap-fit features

### Advantages:

- Excellent tensile elongation and impact strength
- Exceptional powder flowability and melt wet-out
- Produces dense parts with an excellent surface finish
- Material has potential for high recyclability
- Color stability

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## PA 4000



**Part Bed Temp** 168°C  
**Piston Temp** 140°C  
**Cylinder Temp** 140°C  
**Feed Temp** 140°C



**Fill Laser Power**  
70W  
**Fill Scan Spacing**  
0.3  
**Fill Scan Count**  
1



**Layer Thickness**  
0.12 mm



**Colors Available**  
Natural White

Scan to get  
print profiles:



### Mechanical Properties<sup>1</sup>

	Test Condition	Typical Value	Method
Tensile Modulus (MPa)	XY coupons, Conditioned	1790	ASTM D638, Type I
Tensile Yield Strength (MPa)		21	
Tensile Elongation at Break (%)		34	
Ultimate Tensile Strength (MPa)		46	
Flexural Modulus (MPa)	XY coupons, Conditioned	1020	ASTM D790
Flexural Strength (MPa)		38	
Izod Impact, notched (J/m)	XY coupons, Conditioned	48	ASTM D256
Izod impact, un-notched (J/m)		1010	

1. Testing conducted on printed specimens conditioned at 23°C / 50% RH for 40 hours.

### Other Physical Properties

	Test Condition	Typical Value	Method
Bulk Density (g/cm <sup>3</sup> )	Ambient	0.5	ASTM D1895
Part Density (g/cm <sup>3</sup> )	Ambient	1.02	ASTM D792
Moisture Absorption (weight %)	24 Hours	.26	ASTM D570
Particle Size Distribution (µm)	D10	43	Laser Diffraction
	D50	59	
	D90	83	