

**Product Description**

PA 4050 GB has well-balanced material characteristics that are ideal for applications that require durable, high-quality parts. The detail resolution and excellent surface finish allow for solid-built parts. Multiple finishing possibilities make PA 4050 GB ideal for open-sourced laser sintering 3D printers. Similar to a PA 12 GB, PA 4050 GB should be selected for applications that require functional testing, durable prototyping, or low-volume builds. With increased dimensional stability, this material holds up to heavy-duty part requirements. Some common applications include (but are not limited to): functional prototypes, complex geometries, low temperature duct work, caster housings, and other housings and enclosures.

**Advantages**

Excellent impact strength, produces dense parts with an excellent surface finish, color stability, and relative isotropic performance.

**Storage and Use**

PA 4050 GB NATURAL does not need to be dried, but should be processed in an inert environment. Recommend storing material in a closed container in a dry environment.

**Properties**

<b>Mechanical Properties<sup>1</sup></b>			
	<b>Test Condition</b>	<b>Typical Value</b>	<b>Method</b>
Tensile Modulus (MPa)	XY coupons, Conditioned	3390	ASTM D638, Type I
Tensile Yield Strength (MPa)		25	
Tensile Elongation at Break (%)		6	
Ultimate Tensile Strength (MPa)		44	
Flexural Modulus (MPa)	XY coupons, Conditioned	2680	ASTM D790
Flexural Strength (MPa)		67	
Izod Impact, notched (J/m)	XY coupons, Conditioned	33	ASTM D256
Izod impact, un-notched (J/m)		221	

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

<b>Thermal Properties</b>			
	<b>Test Condition</b>	<b>Typical Value</b>	<b>Method</b>
Heat Deflection Temperature (°C)	0.455 MPa	172	DMA
Heat Deflection Temperature (°C)	1.82 MPa	129	

<b>Other Physical Properties</b>			
	<b>Test Condition</b>	<b>Typical Value</b>	<b>Method</b>
Bulk Density (g/cm <sup>3</sup> )	Ambient	0.67	ASTM D1895
Part Density (g/cm <sup>3</sup> )	Ambient	1.49	ASTM D792
Moisture Absorption (weight %)	24 hours	0.11	ASTM D570
Particle Size Distribution (µm)	D10	29	Laser Diffraction
	D50	53	
	D90	84	

<b>Recommended Processing Conditions</b>	
Part Bed Temperature (°C)	164

**Disclaimer:** The information in this technical data sheet, including material properties, are obtained from testing representative samples under carefully controlled conditions and are provided for reference only. Material properties may be impacted by storage, handling, processing equipment/parameters, and product design, among other factors. The information is not a substitute for user testing to determine fitness for any specific use and the user is responsible for ensuring safe and lawful use of the product.

No express or implied warranties are provided and the implied warranties of merchantability or fitness for a particular purpose are expressly disclaimed. No representations are made, and no liability is assumed arising from or relating to the product.

**Copyright/Trademark:** © 2019 Jabil Inc. All rights reserved. JABIL® and the JABIL logo are registered trademarks of Jabil Inc.