

Jabil PLA 3110P Powder

PRODUCT DESCRIPTION

With renewably sourced biomaterials and lower sintering temperature, our PLA powder for PBF printing systems results in a more sustainable SLS substrate with less energy usage and a smaller carbon footprint than PA-12. The PLA component is derived entirely from certified renewably sourced biomaterials, meeting demand for a biobased alternative to petrochemical-based powders.

ADVANTAGES

- Biobased alternative to petrochemical based powders like PA-12
- Cost effective prototyping option with lower sintering temperature and significantly smaller carbon footprint compared to incumbent materials
- PLA is easy to work with and has a faster start up then conventional powders
- Can support precision geometries needed for thermoforming and compression molds

PROPERTIES

MECHANICAL PROPERTIES

	Test Condition	Typical Values	Method
Tensile Modulus (MPa)	XY coupons, Ambient	4100	ASTM D638, Type IV
Tensile Elongation at Break (%)	XY coupons, Ambient	0.7	ASTM D638, Type IV
Ultimate Tensile Strength (MPa)	XY coupons, Ambient	26	ASTM D638, Type IV
Tensile Modulus (MPa)	Z coupons, Ambient	3900	ASTM D638, Type IV
Tensile Elongation at Break (%)	Z coupons, Ambient	0.45	ASTM D638, Type IV
Ultimate Tensile Strength (MPa)	Z coupons, Ambient	15	ASTM D638, Type IV
Flexural Modulus (MPa)	XY coupons, Ambient	3500	ASTM D790
Flexural Strength (MPa)	XY coupons, Ambient	27	ASTM D790
Compression Modulus (MPa)	XY coupons, Ambient	2700	ASTM D695
Compressive Stress at Yield (MPa)	XY coupons, Ambient	110	ASTM D695
Izod Impact, notched (J/m)	XY coupons, Ambient	14	ASTM D256
Izod impact, un-notched (J/m)	XY coupons, Ambient	70	ASTM D256

THERMAL PROPERTIES

	Test Condition	Typical Values	Method
Melt Onset Temperature (°C)	Ambient	160	ASTM D3418
Heat Deflection Temperature (°C)	0.455 Mpa	130	DMA
Heat Deflection Temperature (°C)	1.82 Mpa	65	DMA

OTHER PHYSICAL PROPERTIES

	Test Condition	Typical Values	Method
Bulk Density (g/cm ³)	Ambient	0.54	ASTM D1895
Part Density (g/cm ³)	Ambient	1.19	ASTM D792
Particle Size Distribution (µm)	D10	29	Laser Diffraction
Particle Size Distribution (µm)	D50	51	Laser Diffraction
Particle Size Distribution (µm)	D90	76	Laser Diffraction

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.

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