Jabil **ABS 1400 LW** Filament

Technical Data Sheet

Product Description

Jabil's ABS 1400 LW is easy to print with balanced properties that consistently lay flat. It has minimal warping when printed with 100% infill in a non-heated chamber system. It also maintains good layer-to-layer adhesion from the bottom of the build to the top, with excellent surface appearance. The ABS 1400 LW is great for applications where the properties of ABS are wanted, but low warp is required.

Jabil's ABS 1400 LW is more durable and heat resistant to parts printed with PLA and can be used with Direct Drive or Bowden Tube 3D printers. The material also can stand up to several finishing processes such as vapor polish, sanding, dyeing, painting, and adding a gloss finish. The 1400 LW material is a great option for prototypes and parts that require the ability to stand up to a lot of wear and tear, particularly given its multiple finishing processes.

Advantages

Easy printability, excellent bed adhesion, durable, stiffer than typical ABS filament, reduced CLTE, good chemical resistance (to most fluids), and improved dimensional stability are key advantages of Jabil ABS 1400 LW. This product has very consistent lot-to-lot print properties with an ISO 9001 Certificate of Analysis available upon request.

Storage and Use

ABS is a hygroscopic material, meaning it will absorb moisture from the atmosphere, affecting visual quality and mechanical properties. For best results, print and store filament in a dry environment. If necessary, dry filament in an oven at 80 °C (175 °F) for 3 – 4 hours.

> For the latest print profiles, search for Jabil Engineered Materials in the Cura Marketplace.
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> For complete copies of the Print Settings and the Printing & Drying Guide, visit our ABS 1400 LW Webpage.

Properties

Mechanical Properties - Dry as Printed[1]			
	Test Condition	Typical Value	Method
Tensile Modulus (MPa)	XY coupons, Ambient	2730	ASTM D638, Type I
Tensile Elongation at Break (%)		3.3	
Ultimate Tensile Strength (MPa)		35.3	
Flexural Modulus (MPa)	XY coupons, Ambient	2450	ASTM D790
Flexural Strength (MPa)		59.8	
Izod Impact, Notched (J/m)	XY coupons, Ambient	39	ASTM D256
Izod Impact, Un-notched (J/m)	XY coupons, Ambient	235	

1. Testing conducted on bars printed at 270 °C and tested at <0.20 wt% moisture. Typical values are for reference only.

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Thermal Properties			
	Test Condition	Typical Value	Method
Heat Deflection Temperature (°C)	0.455 MPa	101	DMA
Heat Deflection Temperature (°C)	1.82 MPa	92	
Glass Transition Temperature (°C)	20°C/min ramp	111	DSC

Other Physical Properties			
	Test Condition	Typical Value	Method
Density (g/cm^3)	Ambient	1.10 – 1.12	ASTM D792
Moisture Absorption (weight %)	24 hours	0.3 %	ASTM D570

Dimensional Properties			
	Test Condition	Typical Value	Method
Diameter: Mean, Indiv. Axis (mm)	In-line, 100% inspection	+/- 0.05	Laser Micrometer