

PLA

Commodity Material



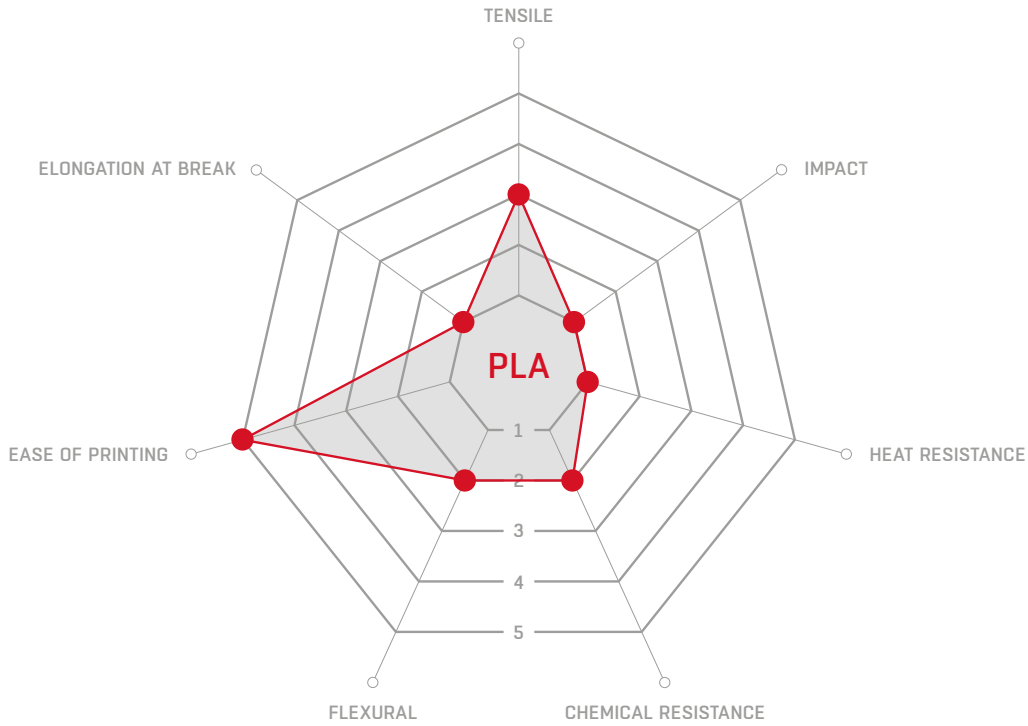
General Properties		Standard
Printed Part Density	1248 kg/m ³ / 77.9 lb/ft ³	ISO 1183-1

Thermal Properties		Standard
HDT at 1.8 MPa	55 °C / 131 °F	ISO 75-2
HDT at 0.45 MPa	65 °C / 149 °F	ISO 75-2
Glass Transition Temperature	61 °C / 142 °F	ISO 11357-2
Melting Temperature	151 °C / 304 °F	ISO 11357-3
Melt Volume Rate	21.2 cm ³ /10 min / 1.29 in ³ /10 min (220 °C, 5 kg)	ISO 1133

Mechanical Properties



Print direction	Standard	XY	XZ	ZX
		Flat	On its edge	Upright
Tensile strength	ISO 527	34.7 MPa / 5.0 ksi	-	21.2 MPa / 3.1 ksi
Elongation at Break	ISO 527	4.2 %	-	1.2 %
Young's Modulus	ISO 527	2308 MPa / 335 ksi	-	2131 MPa / 309 ksi
Flexural Strength	ISO 178	98.0 MPa / 14.2 ksi	105 MPa / 15.2 ksi	54.9 MPa / 8.0 ksi
Flexural Modulus	ISO 178	1860 MPa / 270 ksi	1708 MPa / 247 ksi	1715 MPa / 249 ksi
Flexural Strain at Break	ISO 178	4.8 %	4.2 %	1.9 %
Impact Strength Charpy (notched)	ISO 179-2	2.5 kJ/m ²	1.9 kJ/m ²	1.7 kJ/m ²
Impact Strength Charpy (unnotched)	ISO 179-2	13.2 kJ/m ²	14.3 kJ/m ²	4.3 kJ/m ²
Impact Strength Izod (notched)	ISO 180	3.3 kJ/m ²	2.1 kJ/m ²	1.6 kJ/m ²
Impact Strength Izod (unnotched)	ISO 180	11.0 kJ/m ²	9.6 kJ/m ²	4.7 kJ/m ²



General information

COMPONENTS

Polylactic acid based filament for Fused Filament Fabrication.

PRODUCT DESCRIPTION

PLA is one of the most used materials for 3D printing. PLA is available in a wide range of colors. The glossy feel often attracts those who print display models or items for household use. Many appreciate the plant-based origin of this material. When properly cooled, PLA has a high maximum printing speed and sharp printed corners. Combining this with low warping of the print makes it a popular plastic for home printers, hobbyists, prototyping and schools.that any proprietary rights and existing laws and legislation are observed.

DELIVERY FORM AND WAREHOUSING

PLA filament should be stored at 15 - 25°C in its originally sealed package in a clean and dry environment. If the recommended storage conditions are observed the products will have a minimum shelf life of 12 months.

PRODUCT SAFETY

Recommended: Process materials in a well ventilated room, or use professional extraction systems. For further and more detailed information please consult the corresponding material safety data sheets.

Detailed data are available on our website
www.3dgence.com

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