

T-PLA

Toughening Polylactic Acid

FEATURES	APPLICATIONS
<ul style="list-style-type: none"> • Environment friendly and biodegradable • Low shrinkage, excellent dimensional stability • Excellent impact resistance 	<ul style="list-style-type: none"> • Product models • Art crafts • Adornments

Properties ^[1]	Test Standard	Test Condition	S.I. Unit	S.I. Typical Value ^[2]	
				Printing	Injection Moulding
Physical Properties					
Density	ISO 1183	23℃	g/cm ³	1.20	
Glass transition Temperature	ISO 11357	10℃/min	℃	60	
Melt Index	ISO 1133	190℃, 2.16kg	g/10min	4.5	
Mechanical Properties					
Tensile strength	ISO 527	50mm/min	MPa	34.5	46.8
Elongation at break	ISO 527	50mm/min	%	4.1	230.5
Bending Strength	ISO 178	2m/min	MPa	61.2	73.5
Bending modulus	ISO 178	2m/min	MPa	2010	2325
Izod Impact, Notched	ISO 180	23℃	KJ/m ²	14.5	20.5
Thermal Properties					
Heat distortion temperature	ISO 75	0.45MPa	℃	53	
Flammability	UL94	1.6mm	Class	HB	

[1] These are typical values of the product's properties, and these values alone do not represent a sufficient basis for any part design and are not intended for use in establishing maximum, minimum, or ranges of values for specification purposes.

[2] The listed values are maybe different for pigmented material. **Printing conditions:** Printing temperature=210℃, printing speed=80mm/s, number of shells=2, Nozzle size=0.4mm, and 100% infill. **Injection molding processing conditions:** Temperature:190℃;Back pressure:0-1MPa; mould temperature: 30-40℃

Typical Conditions of Printing

Printing Recommendation	Typical Range
Extruder Temperature	190-230°C
Printing Speed	30-100mm/s
Bed Temperature	Room temperature-40°C
Layer Height	0.1-0.4mm
Infill	As needed up to 100%
Matters need attention	General print

The parameter is just for referential purpose only. In actual processing, the parameter should be adjusted by construction of 3D machine, shape and size of product, and so on.

SAFETY AND HANDLING CONSIDERATIONS

Material safety data sheets (MSDS) for resins are available from Guangzhou Popbit 3D Technology Co. Ltd. and its subsidiaries. MSDS sheets are provided to help customers satisfy their own handling, safety, disposal needs, and those that may be required by locally applicable health and safety regulations.

The following comments are general and applied only to panels as supplied.

These panels have a very low degree of toxicity under normal conditions of use and should pose no unusual problems from ingestion, eye, or skin contact. However, caution is advised when handling, storing, using, or disposing of these panels.

Caution must be used when cutting banding off coil due to

spring-back of material. Always protect eyes with goggles; cover nose and mouth with a filter mask when cutting panels.

Color change of the product may be caused by UV exposure in general. So it is recommended that storage should keep in dry, cool place and avoid direct sunlight

We encourage customers and potential users of our products to review their applications for such products from the standpoint of human health and environmental quality. To help ensure that our products are not used in ways for which they were not intended or tested, our personnel will assist customers in dealing with ecological and product safety considerations. Your sales representative can arrange the proper contacts.