HiTerra® PLA 1816 3DP

Techmer Polymer Modifiers - *Polylactic Acid*

Product Description

HiTerra® PLA 1816 3DP is a specially formulated and compounded thermoplastic material designed for general purpose additive manufacturing applications. This product has been optimized for maximum printability in additive manufacturing.

General	
Material Status	• Commercial: Active
Availability	• North America
Filler / Reinforcement	• Natural Fiber
Features	• Renewable Resource Content
Processing Method	• 3D Printing

Properties [1]

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity			ASTM D792
-- [2]	1.10		
-- [3]	1.10		
-- [4]	1.10		

Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			ASTM D638
-- [2]	480000	psi	
-- [3]	350000	psi	
-- [4]	750000	psi	
Tensile Strength			ASTM D638
Yield [2]	4100	psi	
Yield [3]	2350	psi	
Yield [4]	7100	psi	
Tensile Elongation			ASTM D638
Break [2]	1.5	%	
Break [3]	0.90	%	
Break [4]	2.0	%	
Flexural Modulus [4]	750000	psi	ASTM D790
Flexural Strength [4]	12000	psi	ASTM D790

Impact	Nominal Value	Unit	Test Method
Notched Izod Impact [4]	0.50	ft·lb/in	ASTM D256

Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load [4] (66 psi, Unannealed)	120	°F	ASTM D648

Additional Information		Nominal Value	Unit	Test Method
Recommended Print Bed	Garolite sheet or heated sanded aluminum bed with cement glue			
Recommended Print Bed Temperature		190 to 210	°F	

Processing Information

Extrusion	Nominal Value	Unit
Drying Temperature	160	°F
Drying Time	4.0 to 6.0	hr
Cylinder Zone 1 Temp.	320 to 350	°F
Cylinder Zone 2 Temp.	340 to 360	°F
Cylinder Zone 3 Temp.	340 to 360	°F
Cylinder Zone 4 Temp.	340 to 380	°F
Melt Temperature	320 to 380	°F
Die Temperature	350 to 380	°F

Extrusion Notes

If drying for longer than 6 hours, recommend reducing the temperature to 110°F in a dessiccant dryer to avoid degradaton of the material.

Notes

[1] Typical properties: these are not to be construed as specifications.

[2] Additive Manufactured - X Orientation

[3] Additive Manufactured - Z Orientation

[4] Injection Molded