TDS Rev 2.0

Technical Data Sheet: CX08 PLA PRIME SERIES 3D PRINTING FILAMENT

BASE RESIN: NatureWorks Ingeo Biopolymer

Physical Properties	Standard	Unit	Typical Value
Specific Gravity - Density	ASTM D792	g/cc	1.24
Melt Flow Rate @210°C/2.16 kg	ASTM D1238	g/10 min	7 – 9
Rel. Vis. @ 1.0 g/dL in $CHCl_3$ @30°C	ASTM D5225	g/dL	4.0

Mechanical Properties	Standard	Unit	Typical Value
Tensile Yield Strength	ASTM D638	MPa	51
Tensile Modulus	ASTM D638	MPa	2315
Tensile Elongation	ASTM D638	%	3.31
Tensile Strength	ASTM D638	MPa	50
Notched Izod Impact	ASTM D256	J/m	118
Shrinkage Rate < 0.5%	ASTM D955	mm/mm	.0002

Thermal Properties	Standard	Unit	Typical Value
Glass Transition Temperature (Tg)	ASTM D3418	°C	55 – 60
Heat Distortion Temp @ 0.45MPa	ASTM E2092	°C	80 – 90
Decomposition Temperature	ASTM D3418	°C	250

SPECIFICATIONS Filament Size:	1.75mm	0.0689 in	2.85mm	0.1122 in
MIN Diameter:	1.72mm	0.0677 in	2.79mm	0.1098 in
MAX Diameter:	1.78mm	0.0701 in	2.91mm	0.1146 in
Tolerance Standard Dev. Ovality	+/- .03mm	+/- 0.0012 in	+/- .06mm	+/- 0.0024 in

CERTIFICATIONS
Filament Complies with 2008 Consumer Product Safety Improvement Act (CPSIA) 2008
Filament Complies with CONEG Regulations
Filament Complies with RoHS Directive 2002/95/EC
FCN 000178 for the resin became effective on 1/3/2002 and is a permitted component of food packaging materials pursuant to set. 201(s) of the Federal Food, Drug, and Cosmetic Act, and parts 182, 184, and 186 of the Food Additive Regulations.

Printed Specimen Conditions
Printer: Open Source FDM/FFF
Nozzle: 0.4mm
Layer Height: 0.25mm
Infill: 100%, +/-45°
Extrusion Temp: 225°C
Bed Temp: None Needed (or 50 – 70°C if applicable)
Specimen Orientation: XY Flat
Annealed at 110°C/15 min.

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