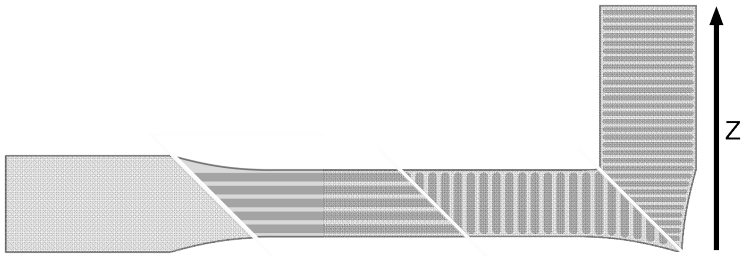
Technical Data Sheet

Essentium Copolyester PCTG

ESSENTIUM
BUILD YOUR WORLD™

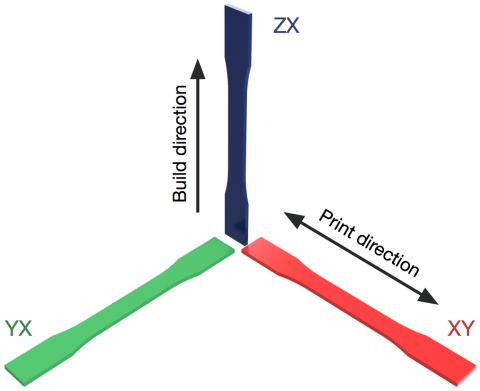
Description:

Essentium Copolyester PCTG is a member of the copolyester family, chemically similar to PETG. Our PCTG is an easy-to-use material with incredible surface finish and excellent impact resistance. This robust material can be printed in open air, and over a large temperature range. Depending on the temperature you choose, you can give your prints either a glossy finish on the high end or a matte finish on the low end. Compared to PETG, our PCTG has similar strength and stiffness, while offering superior impact strength and chemical resistance.



Metric	Method	Molded Properties	3D Printed Properties[1]		
			XY	YX	ZX
Tensile Strength, MPa	ASTM D638	39	38	38	27
Tensile Modulus, MPa	ASTM D638	1748	1670	1507	1426
Flexural Strength, MPa	ASTM D790	68	68	60	53
Flexural Modulus, MPa	ASTM D790	1907	1692	1416	1264
Notched Izod Impact, J/m	ASTM D256	1350	109	29	25

Metric	Method	Properties[2]
Specific Gravity[2]	ASTM D792	1.23
Melting Point[2], °C	ASTM D3418	202
Glass Transition Temperature, °C	ASTM D3418	76
Heat Deflection Temperature[2], °C		
0.45 MPa (66 psi)	ASTM D648	70
1.80 MPA (264 psi)	ASTM D648	62



Recommended Print Settings:	
Extrusion Temperature, °C	210-260
Bed Temperature, °C	23-60
Enclosure Temperature, °C	Room Temperature
Print Speed, mm/s	30-70

Notes:
(1) Print settings: nozzle temp: 275 °C, bed temp: 80 °C, infill: 100%, speed: 30mm/s, layer height: 0.3mm, extrusion multiplier: 1.0, nozzle diameter: 1.0mm
(2) Values taken from pellet mfr. TDS

Essentium Materials, LLC
5880 Imperial Loop Dr.
Suite 10
College Station, TX 77845
essentiummaterials.com
979.777.2354