

Technical specification

High performance Polycarbonate filament developed for excellent performance in demanding applications. Excellent strength, stiffness and toughness. UV stabilized for protection against UV light. Vicat softening point of over 140 °C. UL V2 flammability rating supports application in electrical applications.

For at least 55 % based on biobased monomers from biomass or natural waste such as residual fats and vegetable oils.

Base resin properties

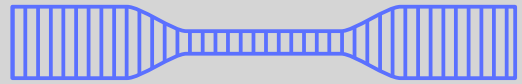
Property	Standard	Method/Unit	Value
Vicat softening temperature	ISO 306	50 N; 120 °C/h	143 °C
Density kg/m ³	ISO 1183-1	kg/m ³	1200
Melt volume rate	ISO 1133	300°C /1.2 kg	19 cm ³ /10 min
UV resistance			UV stabilized
Flammability	UL 94	0.75 mm Class UL	V2

Typical printing properties

Property	Standard	Method/Unit	Value
Nozzle temperature range		°C	250-320
Recommended minimum printing bed temperature		°C	110
Build room temperature			Closed chamber
Drying before printing		Minutes at 120 °C	240

Other

Property	Standard	Method/Unit	Value
Wire diameter 1		mm	1.75 +/- 0.075
Wire diameter 2		mm	2.85 +/- 0.075
Packaging			750 gr. , 5kg. on PC spool



“Z 90” printed vertically



“XY 45” printed on bed, 45° angle

Characteristics printed samples

Properties

Property	Standard	Method/Unit	Value
Tensile strength	ASTM D638	XY 45 direction, MPa	60.4
		Z 90 direction, MPa	59.6
Youngs modulus	ASTM D638	XY 45 direction, MPa	1462
		Z 90 direction, MPa	NA
Elongation at break	ASTM D638	XY 45 direction	6.5 %
		Z 90 direction	6.2 %
Bending strength	ISO 178	XY 45 direction, MPa	86.8
Bending modulus	ISO 178	XY 45 direction, MPa	1790
Charpy impact strength unnotched	ISO 179-1, 5 J	XY 45 direction, KJ/m2	No breakage
Resistance to heat	Signify method ISO 75	°C	144

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Data based on measurements on clear material, colored material properties can deviate.

