


Code	PRO_TDS_57	PRO TECHNICAL DATA SHEET TDS	
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SECTION 1: PRODUCT DESCRIPTION

FC 50360 is a product made with PLA-based composite that performs in terms of temperature resistance, withstanding higher temperatures after crystallization compared to conventional PLA. Product suitable for production of 3D filament.


SECTION 2: PHYSICAL PROPERTIES & GUIDELINES FOR USE

FC 50360 is supplied as off-white pellets. Temperatures during transportation and storage may not exceed 50 °C. Storage time of unopened bags may not surpass 24 months at room temperature. Drying prior to processing is essential. A moisture content less than 100 ppm is recommended to prevent viscosity degradation. The property values listed below should be viewed as guidelines only and may vary based on processing conditions. No warranties of any kind, either expressed or implied are made regarding products described or regarding designs, data or information set forth. Process temperatures must not exceed 230 °C.

Drying: dry the material for 4 – 6 hours at 80 °C.

	Setting, °F*	Setting, °C*
Feed Throat	104	40
Feed Zone	320 – 392	160 – 200
Melting Zones	338 – 428	170 – 220
Die	410 – 428	210 – 220
Water Tank	140 – 167	60 – 75
Cooling Bath	< 104	< 40
Screw Speed	30 – 60 ppm	

*These settings are intended as a starting point. Optimization may be required.

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Physical Properties	Test Method	Value
Melt Flow Rate (190°C, 2.16 kg)	ASTM D1238:20	7 – 11 g/10 min
Appearance	-	Off-White

Mechanical Properties	Test Method	Value
Tensile Strength*	ASTM D638:22	> 60 MPa
Elongation at break*	ASTM D638:22	< 45 %
Notched Izod Impact Strength*	ASTM D256:10	< 80 J/m
Heat Deflection Temperature (before crystallization)	ASTM D648:18	50 – 55 °C
Heat Deflection Temperature (after crystallization)**	ASTM D648:18	> 123 °C

*Data obtained from 30 °C injection molded standard test bars;

**Procedure: heating during 2 hours at 80 °C with posterior cooling for 8 hours slowly.

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