


Code	PRO_TDS_05	PRO TECHNICAL DATA SHEET TDS	
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SECTION 1: PRODUCT DESCRIPTION

FC 25040 is a product made with PLA composite reinforced with mineral filler whose technology used is based on renewable minerals and developed especially for PLA. Advantages over conventional PLA include improved impact resistance, elongation and heat transfer. Product suitable for injection molding applications.


SECTION 2: PHYSICAL PROPERTIES & GUIDELINES FOR USE

FC 25040 is supplied as 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. In order to achieve high Heat Deflection Temperatures, hot molding or annealing of the part is required.

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

	Settings, °F*	Settings, °C*
Feed Throat	70	21
Feed Section	260-300	130-150
Zone 1	375-395	191-200
Zone 2	375-395	191-200
Zone 3	375-395	191-200
Zone 4	375-395	191-200
Hot Runner	395-410	200-210
Nozzle	395-410	200-210
Screw Speed	40 – 100 rpm	

*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	18 – 33 g/10 min
Density	ASTM D792:20	1.55 g/cm ³
Appearance	-	White/Beige
Shrinkage from Mold Dimensions	ASTM D955:14	Parallel (24 h): 0,18±0,09%
		Perpendicular (24 h): 0,15±0,07%
		Parallel (48 h): 0,19±0,09%
		Perpendicular (48 h): 0,17±0,06%

* Injection mold at 30 °C.

Mechanical Properties*	Test Method	Value
Tensile Strength	ASTM D638:22	> 17 MPa
Elongation at break	ASTM D638:22	> 30%
Notched Izod Impact Strength	ASTM D256:10	> 100 J/m
Flexural Modulus	ASTM D790:17	3300 – 4100 MPa
Heat Deflection Temperature (before crystallization)	ASTM D648:18	50 – 54 °C

*Data obtained from 30 °C injection molded standard test bars (Type I).

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