

Tepla® T7150GF

Material Description:

Tepla® T7150GF is a 50% chopped glass fiber-reinforced polyaryletherketone (PAEK) resin. It has been specifically formulated to provide exceptionally high strength and stiffness at elevated temperatures along with very strong chemical resistance to a broad range of harsh chemical environments encountered across a wide variety of industries and engineering applications. Typical potential applications for Tepla® T7150GF include orthopedic and dental instruments, under-the-hood automotive parts, and parts in the chemical and oil and gas industries. This grade is easily injection moldable into precision molded parts.

General		
Material Status	• Commercial: Active	
Availability	• Asia Pacific	• North America
	• Europe	• Latin America
	• Middle East	• Africa
Filler/Reinforcement	• Glass Fiber, 50% Filler by Weight	
Features	• Autoclave Sterilizable	• Biocompatible
	• Chemical Resistant	• E-beam Sterilizable
	• Ethylene Oxide Sterilizable	• Fatigue Resistant
	• Flame Retardant	• Good Dimensional Stability
	• Good Sterilizability	• Heat Sterilizable
	• High Heat Resistance	• High Stiffness
	• High Strength	• Radiation (Gamma) Resistant
	• Radiation Sterilizable	• Radiotranslucent
	• Steam Resistant	• Steam Sterilizable
	• Aircraft Applications	• Hospital Goods
Uses	• Automotive Applications	• Industrial Applications
	• Connectors	• Medical Devices
	• Dental Applications	• Medical/Healthcare Applications
	• Electrical/Electronic Applications	• Seals
	• Surgical Instruments	
Appearance	• Black	• Beige
Forms	• Pellets	
RoHS Compliance	• Contact Manufacturer	
Processing Method	• Injection Molding	• Machining
	• Profile Extrusion	

Physical Properties	Typical Value	Unit	Test Method
Density/Specific Gravity	1.73	g/cm ³	ASTM D792
Water Absorption (24 hr)	0.1	%	ASTM D570
Melt Mass-Flow Rate (MFR) (400°C/2.16 kg)	5	g/10min	ASTM D1238

Mechanical Properties	Typical Value	Unit	Test Method
Tensile Modulus ¹	20000	MPa	ASTM D638
Tensile Strength ¹	220	MPa	ASTM D638
Tensile Elongation ¹ (Break)	1.5	%	ASTM D638
Flexural Modulus	18500	MPa	ASTM D790
Flexural Strength	320	MPa	ASTM D790
Flexural Elongation at Break	2	%	ASTM D790

Impact Properties	Typical Value	Unit	Test Method
Notched Izod Impact	137	J/m	ASTM D256
Unnotched Izod Impact	1050	J/m	ASTM D4812

Thermal Properties	Typical Value	Unit	Test Method
Deflection Temperature Under Load 1.8 MPa, Annealed, 3.2mm	287	°C	ASTM D648
Glass Transition Temperature	158	°C	ASTM D3418
Peak Melting Temperature	340	°C	ASTM D3418

Processing Information	Typical Value	Unit
Injection Rate	Fast	
Screw Compression Ratio	2.0:1.0 to 3.0:1.0	
Mold Temperature	160 to 190	°C
Drying Temperature	149	°C
Drying Time	4	hr
Front Temperature	377	°C
Middle Temperature	371	°C
Rear Temperature	365	°C
Nozzle Temperature	382	°C
Processing (Melt) Temp	366 to 388	°C

Fill Analysis	Typical Value	Unit	Test Method
Melt Viscosity (400°C, 1000 sec ⁻¹)	630	Pa·s	ASTM D3835

Notes:

¹ 5.0 mm/min

NFD ADVANCED COMPOSITES

Tepla® T7150GF

CAUTION/警告!

Before using, read the Molding Guide, Material Safety Data Sheets, and Bulletins available from NFD Advanced Composites Sales offices and Distributors supplied to your company. Caution! During drying, purging and molding, small amounts of hazardous gases and/or particulate matter may be released. These may irritate eyes, nose and throat. Use adequate local exhaust ventilation during thermal processing. To prevent resin decomposition, do not contaminate the resin or exceed the recommended melt temperature or hold-up time. Avoid inhalation or skin and eyes contact. Sweep up and dispose of spilled resin to eliminate slipping hazard. 在使用之前, 请阅读NFD公司销售办事处和经销商提供给贵公司的材料成型指南、材料安全数据表和公告。警告! 在干燥、吹扫和成型过程中, 少量有害气体或颗粒物可能会在被释放, 这些可能会刺激眼睛, 鼻子和喉咙。热处理过程中请注意做好排气通风工作。为防止树脂分解, 请勿污染树脂或超过我们为您推荐熔融温度或时间。请避免吸入或与皮肤、眼睛等接触。清扫和处理溢出的树脂, 以消除滑到的危险。

LEGAL NOTICES/法律声明

The figures indicated here are approximate values. They may be affected by different factors, and the user is not released therefore from the obligation of performing checks and trials of his own. The values indicated here have been compiled on the basis of current tests and findings. Any legally binding guarantee of certain properties, or any suitability for a specific application can not be inferred from the present data. For detailed production regulatory information, contact customer service.

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