New Formula Designer

Matreial Data Sheet

技术数据表

NFD Composite Material (Jiangsu) Co., Ltd

Tepla® T7040CF

Material Description:

Tepla ® T7040CF is a 40% chopped carbon fiber-reinforced polyetheretherketone (PEEK). The carbon fiber content in the formulation is designed to provide maximum strength and stiffness properties. The resin has all the key performance as is known including resistance to harsh chemical environments, high heat resistance (both short and long term), along with excellent fatigue resistance.This resin is a high flowing/low viscosity grade and is ideally suited for use in injection molding fabrication. It can be melt processed using standard thermoplastic melt processing equipment.Potential application areas for Tepla® T7040CF include uses in the aerospace industry and some other transportation applications where maximum mechanical properties are desired while maintaining a low specific gravity. Semiconductor fabrication is another industrial area of possible use for this resin as are the chemical processing, oil and gas, and health care industries.

General		
Material Status	• Commercial: Active	
Availability	• Asia Pacific	• North America
	• Europe	• Latin America
	• Middle East	• Africa
Filler/Reinforcement	• Carbon Fiber, 40% Filler by Weight	
Features	• Autoclave Sterilizable	• Good Sterilizability
	• Chemical Resistant	• Flame Retardant
	• Heat Sterilizable	• High Strength
	• High Heat Resistance	• E-beam Sterilizable
	• Radiation (Gamma) Resistant	• Ethylene Oxide Sterilizable
	• Radiation Sterilizable	• Fatigue Resistant
	• Radiotranslucent	• Good Dimensional Stability
	• Steam Resistant	• Steam Sterilizable
	• High Stiffness	• High Flow
Uses	• Surgical Instruments	• Aircraft Applications
	• Industrial Applications	• Medical Devices
	• Connectors	• Dental Applications
	• Medical/Healthcare Applications	• Oil/Gas Applications
	• Pump Parts	• Film
	• Seals	• Hospital Goods
	• Electrical/Electronic Applications	
Appearance	• Black	
Forms	• Pellets	
RoHS Compliance	• RoHS Compliant	
Processing Method	• Injection Molding	• Machining
	• Profile Extrusion	

Physical Properties	Typical Value	Unit	Test Method
Density/Specific Gravity	1.46	g/cm^3	ASTM D792

Mechanical Properties	Typical Value	Unit	Test Method
Tensile Modulus	33000	MPa	ASTM D638
Tensile Strength	256	MPa	ASTM D638
Tensile Elongation [1] (Break)	1.7	%	ASTM D638
Flexural Modulus	30350	MPa	ASTM D790
Flexural Strength	390	MPa	ASTM D790
Flexural Elongation (Break)	1.8	%	ASTM D790

Impact Properties	Typical Value	Unit	Test Method
Notched Izod Impact	114	J/m	ASTM D256
Unnotched Izod Impact	902	J/m	ASTM D4812

Thermal Properties	Typical Value	Unit	Test Method
Deflection Temperature Under Load 1.8 MPa, Annealed	332	℃	ASTM D648

Processing Information	Typical Value	Unit
Injection Rate	Fast	
Screw Compresion Ratio	2.5:1.0 to 3.5:1.0	
Mold Temperature	175 to 205	℃
Drying Temperature	150	℃
Drying Time	4	hr
Front Temperature	375	℃
Middle Temperature	370	℃
Rear Temperature	365	℃
Nozzle Temperature	380	℃

Fill Analysis	Typical Value	Unit	Test Method
Melt Viscosity (400℃, 1000 sec^-1)	490	Pa·s	ASTM D3835

Notes:

[1] 5.0 mm/min

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质可能会在被释放，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的熔融温度或时间。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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COMPANY/公司:

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感谢您访问新孚达 （NFD）！ 我们秉承“New Formula Designer”的发展理念，将科研创新与生产应用紧密相连，无论您是设计师、工程师或者是采购专家，我们都可以帮助您拓展业务并获得新的灵感 。 我们坚持诚信、合作、效率、创新的核心价值观，始终把客户放在第一位。相比于我们的竞争对手，我们专注于为您提供更先进的技术配方 、更优质的产品，更好的解决方案及更周到的售后服务，我们懂市场、我们懂产品、我们更懂你们。

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