

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	<ul style="list-style-type: none"> Commercial: Active
Availability	<ul style="list-style-type: none"> Asia Pacific Europe Middle East North America Latin America Africa
Filler/Reinforcement	<ul style="list-style-type: none"> Carbon Fiber, 40% Filler by Weight
Features	<ul style="list-style-type: none"> Autoclave Sterilizable Chemical Resistant Heat Sterilizable High Heat Resistance Radiation (Gamma) Resistant Radiation Sterilizable Radiotranslucent Steam Resistant High Stiffness Good Sterilizability Flame Retardant High Strength E-beam Sterilizable Ethylene Oxide Sterilizable Fatigue Resistant Good Dimensional Stability Steam Sterilizable High Flow
Uses	<ul style="list-style-type: none"> Surgical Instruments Industrial Applications Connectors Medical/Healthcare Applications Pump Parts Seals Electrical/Electronic Applications Aircraft Applications Medical Devices Dental Applications Oil/Gas Applications Film Hospital Goods
Appearance	<ul style="list-style-type: none"> Black
Forms	<ul style="list-style-type: none"> Pellets
RoHS Compliance	<ul style="list-style-type: none"> RoHS Compliant
Processing Method	<ul style="list-style-type: none"> Injection Molding Profile Extrusion Machining

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	°C	ASTM D648
Processing Information	Typical Value	Unit	
Injection Rate	Fast		
Screw Compression Ratio	2.5:1.0 to 3.5:1.0		
Mold Temperature	175 to 205	°C	
Drying Temperature	150	°C	
Drying Time	4	hr	
Front Temperature	375	°C	
Middle Temperature	370	°C	
Rear Temperature	365	°C	
Nozzle Temperature	380	°C	
Fill Analysis	Typical Value	Unit	Test Method
Melt Viscosity (400°C, 1000 sec ⁻¹)	490	Pa·s	ASTM D3835

Notes:

¹ 5.0 mm/min

NFD ADVANCED COMPOSITES

Tepla® T7040CF

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的热融温度或时间。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.

上列数据仅作参考用途, 它们可能会受不同因素的影响, 使用者有责任通过实验自行确定材料特性。上述资料根据现有测试得出, 对物料特性是否适合某特殊用途及特性不能给予保证, 数据也没有任何法律约束力。更多有关详细的产品监管信息, 请联系客户服务。

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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