

Tepla® T7000 CF GR TF

Material Description:

Tepla® T7000 CF GR TF is a polyetheretherketone (PEEK) product, has excellent mechanical properties, wear resistance and low coefficient of friction in both dry and externally lubricated applications. The resin is formulated with a ternary anti-friction/anti-wear additive system comprised of carbon fiber, graphite, and polytetrafluoroethylene (PTFE).

Tepla® T7000 CF GR TF is produced to the highest industry standards. It has excellent wear resistance, fatigue resistance, purity, and chemical resistance to organics, acids, and bases. These properties make it well-suited for applications in transportation, electronics, chemical processing, and industrial uses including oil and gas exploration and production. The resin is black in color in its natural state.

General

Material Status	• Commercial: Active	
Availability	• Asia Pacific	• North America
	• Europe	• Latin America
	• Middle East	• Africa
Filler/Reinforcement	• Carbon Fiber + Graphite + PTFE Lubricant	
Features	• High Heat Resistance	• Good Dimensional Stability
	• Chemical Resistant	• Flame Retardant
	• Wear Resistant	• Fatigue Resistant
Uses	• Hydrolysis Resistant	• Self-Lubricating
	• Automotive Applications	• Aircraft Applications
	• Industrial Applications	• Medical Devices
	• Connectors	• Dental Applications
	• Medical/Healthcare Applications	• Oil/Gas Applications
	• Pump Parts	• Film
	• Seals	• Gears
	• Hospital Goods	• Surgical Instruments
	• Housings	• Tubing
	• Electrical/Electronic Applications	
Appearance	• Natural Color	
Forms	• Pellets	
RoHS Compliance	• RoHS Compliant	
Processing Method	• Injection Molding	• Machining
	• Profile Extrusion	

Physical Properties	Typical Value	Unit	Test Method
Specific Gravity	1.48	g/cm ³	ISO 1183
Water Absorption (24 hr)	0.027	%	ISO 62
Melt Mass-Flow Rate (MFR) 400°C/2.16 kg	13	g/10min	ISO 1133
Molding Shrinkage			ISO 294-4
Flow	0.1 to 0.3	%	
Across Flow	0.65 to 0.85	%	

Hardness	Typical Value	Unit	Test Method
Rockwell Hardness	117		ISO 2039-2
Durometer Hardness (Shore D)	78		ISO 868

Mechanical Properties	Typical Value	Unit	Test Method
Tensile Modulus ¹	15000	MPa	ASTM D638
Tensile Stress	160	MPa	ASTM D638
Tensile Stress (Break)	164	MPa	ISO 527-2/1A
Tensile Elongation (Break)	2	%	ISO 527-2/1A
Flexural Modulus	13600	MPa	ASTM D790

Flexural Strength	225	MPa	ASTM D790
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Impact Properties	Typical Value	Unit	Test Method
Notched Izod Impact	6	kJ/m ²	ISO 180
Unnotched Izod Impact	32	kJ/m ²	ISO 180

Thermal Properties	Typical Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
1.8 MPa, Unannealed	293	°C	
1.8 MPa, Annealed	293	°C	
CLTE - Flow (0 to 50°C)	10.4	cm/cm/°C	ISO 11359-2
Glass Transition Temperature	147	°C	ISO 11357-2
Melting Temperature	343	°C	
Deflection Temperature	321	°C	ISO 75-2

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	366	°C	
Nozzle Temperature	380	°C	

Notes:

¹5.0 mm/min

NFD ADVANCED COMPOSITES

Tepla® T7000 CF GR TF

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.

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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