Tepla® T7020CF HF

Material Description:

Tepla® T7020CF HF is a 20% carbon fiber reinforced Polyetheretherketone(PEEK) with low viscosity.The material has excellent wear resistance,chemical resistance,high strength,dimensional stability and high heat resistance.

General		
Material Status	• Commercial: Active	
Availability	• Asia Pacific	• North America
	• Europe	• Latin America
	• Middle East	• Africa
Filler/Reinforcement	• Carbon Fiber, 20% Filler by Weight	
Features	• Chemical Resistant	• High Heat Resistance
	• Good Dimensional Stability	• High Strength
	• Low Viscosity	• Wear Resistant
Uses	• Aerospace Applications	• Industrial Applications
	• Automotive Applications	• Medical/Healthcare Applications
Appearance	• Black	
Processing Method	• Injection Molding	

Physical Properties	Typical Value	Unit	Test Method
Density/Specific Gravity	1.37	g/cm^3	ASTM D792
Melt Mass-Flow Rate (MFR) 380℃/5.0 kg	45	g/cm^3	ASTM D1238
Molding Shrinkage			ASTM D955
Flow	0.20 to 0.50	%	
Across Flow	0.40 to 0.70	%	
Water Absorption (Equilibrium)	0.3	%	ASTM D570

Hardness	Typical Value	Unit	Test Method
Rockwell Hardness (R-Scale)	100		ASTM D785

Mechanical Properties	Typical Value	Unit	Test Method
Tensile Strength [1]	210	MPa	ASTM D638
Tensile Elongation [1] (Break)	1.8	%	ASTM D638
Flexural Modulus [2]	17000	MPa	ASTM D790
Flexural Strength [2]	315	MPa	ASTM D790

Impact Properties	Typical Value	Unit	Test Method
Notched Izod Impact	85	J/m	ASTM D256
Charpy Unnotched Impact Strength	410	J/m	ASTM D4812

Flammability	Typical Value	Unit	Test Method
Flame Rating			UL 94
1.6 mm	V-0		
3.2 mm	V-0		

Electrical Properties	Typical Value	Unit	Test Method
Volume Resistivity	1.00E+07	ohms·cm	IEC 60093

Thermal Properties	Typical Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
0.45 MPa, Unannealed	340	℃	
1.8 MPa, Unannealed	328	℃	

Vicat Softening Temperature [3]	335	℃	ASTM D1525 [4]
Melting Temperature	343	℃	ASTM D2133

Injection	Typical Value	Unit
Drying Temperature	140 to 170	℃
Drying Time	2.0 to 4.0	hr
Rear Temperature	360 to 390	℃
Middle Temperature	380 to 410	℃
Front Temperature	380 to 400	℃
Processing (Melt) Temp	350 to 390	℃
Mold Temperature	150 to 200	℃
Injection Rate	Slow-Moderate	
Back Pressure	2.00 to 3.00	MPa

Injection Notes
Processing Temp. Limit <430℃

Notes
[1] 50 mm/min
[2] 20 mm/min
[3] .125"
[4] Rate A (50℃/h)

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.
上列数据只作参考用途，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。

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