Tepla® T7000T

Material Description:

Tepla ® T7000T is a low flow, unreinforced polyetheretherketone (PEEK) in non-lubricated, natural-color pellet form.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 healthcare, transportation, electronics, chemical processing, and other industrial uses.

General		
Material Status	• Commercial: Active	
Availability	• Asia Pacific	• North America
	• Europe	• Latin America
	• Middle East	• Africa
Features	• Ductile	• Good Impact Resistance
	• Chemical Resistant	• Flame Retardant
	• High Heat Resistance	• Fatigue Resistant
	• Good Dimensional Stability	• Hydrolysis Resistant
	• Electrical Insulation	• Self-Lubricating
	• Wear Resistant	
Applications	• Automotive Applications	• Aircraft Applications
	• Industrial Applications	• Film
	• Medical/Healthcare Applications	• Oil/Gas Applications
	• 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
Density/Specific Gravity	1.31	g/cm^3	ASTM D792
Water Absorption (24 hr)	0.1	%	ASTM D570
Melt Mass-Flow Rate (MFR) 400℃/2.16 kg	3	g/10min	ASTM D1238
Molding Shrinkage			ASTM D955
Flow (3.18mm)	1.5	%	
Across Flow (3.18mm)	1.8	%	

Hardness	Typical Value	Unit	Test Method
Durometer Hardness (Shore D,1 sec)	88		ASTM D2240

Mechanical Properties	Typical Value	Unit	Test Method
Tensile Modulus	4000	MPa	ISO 527-2/1A/1
Tensile Modulus [1]	3800	MPa	ASTM D638
Tensile Stress [1]	110	MPa	ASTM D638
Tensile Stress (Yield)	109	MPa	ISO 527-2/1A/1
Tensile Elongation (Break)	20 to 32	%	ISO 527-2/1A/1
Tensile Elongation [1] (Break)	20 to 32	%	ASTM D638
Tensile Elongation (Yield)	5	%	ISO 527-2/1A/1
Tensile Elongation [1] (Yield)	5	%	ASTM D638
Flexural Modulus	3900	MPa	ASTM D790
Flexural Strength	148	MPa	ASTM D790

Impact Properties	Typical Value	Unit	Test Method
Notched Izod Impact (23℃)	94	J/m	ASTM D256

Unnotched Izod Impact (23℃)	No Break	ASTM D4812

Thermal Properties	Typical Value	Unit	Test Method
Deflection Temperature Under Load 1.8 MPa, Unannealed, 3.2mm	157	℃	ASTM D648
CLTE - Flow (-50 to 50℃)	4.30E-06	cm/cm/℃	ASTM E831
Glass Transition Temperature	150	℃	ASTM D3418
Peak Melting Temperature	340	℃	ASTM D3418

Processing Information	Typical Value	Unit
Injection Rate	Fast	
Screw Compresion Ratio	2.5:1.0 to 3.5:1.0	
Mold Temperature	176 to 205	℃
Drying Temperature	150	℃
Drying Time	4	hr
Front Temperature	375	℃
Middle Temperature	365	℃
Rear Temperature	355	℃
Nozzle Temperature	375	℃

Notes:

[1] 50 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.
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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