

Tepla® T8130GF

Material Description:

Tepla® T8130GF is a 30% glass-fiber reinforced grade of polyamide-imide (PAI) resin. It offers high strength and modulus and exceptional creep resistance. It has thermal expansion characteristics similar to aluminum and therefore excellent dimensional stability. It has outstanding resistance to wear, creep and chemicals. The mechanical properties of Tepla® T8130GF resin make it a candidate for metal replacement in high temperature, high stress applications. In addition, it offers outstanding electrical properties, which makes it ideal for high performance parts such as connectors, switches and relays.

General		
Material Status	• Commercial: Active	
Availability	• Asia Pacific	• North America
	• Europe	• Latin America
	• Middle East	• Africa
Filler/Reinforcement	• Glass Fiber, 30% Filler by Weight	
Features	• Chemical Resistant	• Creep Resistant
	• Good Compressive Strength	• Good Dimensional Stability
	• Flame Retardant	• High Heat Resistance
	• High Temperature Strength	• High Stiffness
Uses	• Aerospace Applications	• Aircraft Applications
	• Automotive Applications	• Business Equipment
	• Connectors	• Electrical Housing
	• Electrical Parts	• Valves/Valve Parts
	• Housings	• Industrial Applications
	• Industrial Parts	• Machine/Mechanical Parts
	• Metal Replacement	• Oil/Gas Applications
	• Sealing Devices	• Switches
	• Electrical/Electronic Applications	
Forms	• Pellets	
RoHS Compliance	• RoHS Compliant	
Processing Method	• Machining	• Profile Extrusion
	• Injection Molding	

Physical Properties	Typical Value	Unit	Test Method
Density/Specific Gravity	1.61	g/cm ³	ASTM D792
Molding Shrinkage - Flow	0.1 to 0.25	%	ASTM D955
Water Absorption (24 hr)	0.24	%	ASTM D570

Mechanical Properties	Typical Value	Unit	Test Method
Tensile Modulus	15500	MPa	ASTM D638
Tensile Strength	228	MPa	ASTM D638
Tensile Elongation			
Break	2	%	ASTM D638
Break ¹	7	%	ASTM D1708
Flexural Modulus			ASTM D790
23°C	13000	MPa	
232°C	10000	MPa	
Flexural Strength			ASTM D790
23°C	337	MPa	
232°C	185	MPa	
Compressive Modulus	8500	MPa	ASTM D695
Compressive Strength	264	MPa	ASTM D695

Impact Properties	Typical Value	Unit	Test Method
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Notched Izod Impact	82 J/m	ASTM D256
Unnotched Izod Impact	530 J/m	ASTM D4812

Electrical Properties	Typical Value	Unit	Test Method
Surface Resistivity	1.00E+18	ohms	ASTM D257
Volume Resistivity	2.00E+17	Ohms·cm	ASTM D257
Dielectric Strength	33	kV/mm	ASTM D149
Dielectric Constant			ASTM D150
60 Hz	4.4		
1 MHz	4.2		
Dissipation Factor			ASTM D150
60 Hz	0.022		
1 MHz	0.05		

Thermal Properties	Typical Value	Unit	Test Method
Deflection Temperature Under Load 1.8MPa, Unannealed	282	°C	ASTM D648
Coefficient of Linear Thermal Expansion	1.60E-05	cm/cm/°C	ASTM D696
Thermal Conductivity	0.36	W/m/K	ASTM C177

Processing Information	Typical Value	Unit
Mold Temperature	199 to 216	°C
Drying Temperature	177	°C
Drying Time	3	hr
Nozzle Temperature	371	°C
Rear Temperature	304	°C
Screw Speed	50 to 100	rpm
Back Pressure	6.89	MPa
Screw L/D Ratio	18.0:1.0 to 24.0:1.0	

NFD ADVANCED COMPOSITES

Tepla® T8130GF

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热熔温度或时间。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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