

Tepla® T8040CF EC HF

Material Description:

Tepla® T8040CF EC HF is a compound based on Polyetherimide(PEI) containing 40% Carbon Fiber. Added features of this material include: Electrically Conductive, High Flow.

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"> Electrically Conductive Steam Resistant Chemical Resistant Heat Resistant Wear Resistant Radiation (Gamma) Resistant Good Dimensional Stability Fatigue Resistant Creep Resistant Flame Retardant High Stiffness UV Resistant Hydrolysis Stable High Mobility
Applications	<ul style="list-style-type: none"> Hospital Goods Industrial Applications Connectors Dental Applications Aircraft Applications Medical Devices Medical/Healthcare Applications Electrical/Electronic Applications
RoHS Compliance	<ul style="list-style-type: none"> RoHS Compliant
Processing Method	<ul style="list-style-type: none"> Injection Molding

Physical Properties	Typical Value	Unit	Test Method
Specific Gravity	1.44	g/cm ³	ASTM D792
Moisture Absorption (24hr, 50% RH)	0.11	%	ASTM D570
Mold Shrinkage			ASTM D955
Flow, 24 hrs	0.01 to 0.05	%	
Across Flow, 24 hrs	0.1 to 0.5	%	
Poisson's Ratio	0.44		ASTM D638
Melt Mass-Flow Rate (MFR) (380°C/6.7 kg)	40	g/10 min	ASTM D1238

Hardness	Typical Value	Unit	Test Method
Hardness, Rockwell M	112		ASTM D785

Mechanical Properties	Typical Value	Unit	Test Method
Tensile Modulus, 50 mm/min	41000	MPa	ASTM D638
Tensile Stress, break, Type I 5 mm/min	271	MPa	ASTM D638
Tensile Strain, break, Type I 5 mm/min	1	%	ASTM D638
Flexural Modulus, 1.3 mm/min 50 mm span	31800	MPa	ASTM D790
Flexural Stress, break, 1.3 mm/min 50 mm span	360	MPa	ASTM D790
Compressive Strength	219	MPa	NFD Method
Shear Strength	120	MPa	ASTM C 273
Shear Modulus	4662	MPa	ASTM C 273

Impact Properties	Typical Value	Unit	Test Method
Notched Izod Impact, 23°C	65	J/m	ASTM D256

Unnotched Izod Impact, 23°C	551 J/m	ASTM D4812
Notched Izod Impact 80*10*4, 23°C	6.8 kJ/m ²	ISO 180/1A
Unnotched Izod Impact 80*10*4, 23°C	33.5 kJ/m ²	ISO 180/1U
Instrumented Impact Total Energy 23°C	7.2 J	ASTM D3763

Electrical Properties	Typical Value	Unit	Test Method
Surface Resistivity	4.50E+02	Ohm	ASTM D257
Volume Resistivity	4.10E+03	Ohms·cm	ASTM D257

Thermal Properties	Typical Value	Unit	Test Method
Deflection Temperature Under Load 1.82MPa, Unannealed, 3.2mm	193	°C	ASTM D648
0.45 MPa, Unannealed, 3.2 mm	210	°C	
CLTE			ASTM E831
-40°C to 150°C, Flow	3.00E-06	cm/cm/°C	
-40°C to 150°C, Xflow	4.00E-05	cm/cm/°C	

Processing Information	Typical Value	Unit
Maximum Moisture Content	0.02	%
Melt Temperature	380 to 400	°C
Mold Temperature	165 to 180	°C
Drying Temperature	120 to 150	°C
Drying Time	4	hr
Front Temperature	380 to 400	°C
Middle Temperature	380 to 400	°C
Rear Temperature	380 to 400	°C
Back Pressure	0.3 to 0.7	MPa
Screw Speed	50 to 100	rpm

NFD ADVANCED COMPOSITES

Tepla® T8040CF EC HF

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。

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。

CONTACT:

CHINA/JIANG SU

江苏新孚达复合材料有限公司

NFD Composite Material (Jiangsu) Co., Ltd

Email: yanghui@nfdpla.com

Internet: www.nfdpla.com

