Tepla® T8010TF CL

Material Description:

Tepla® T8010TF CL is a compound based on Polyetherimide resin containing 10% PTFE. Added features of this material include: Internally Lubricated.

General		
Material Status	• Commercial: Active	
Availability	• Asia Pacific	• North America
	• Europe	• Latin America
	• Middle East	• Africa
Additive	• 10% PTFE Lubricant	
Features	• Internally Lubricated	• Fatigue Resistant
	• Steam Resistant	• Creep Resistant
	• Chemical Resistant	• Flame Retardant
	• Heat Resistant	• High Stiffness
	• Wear Resistant	• UV Resistant
	• Radiation (Gamma) Resistant	• Hydrolysis Stable
	• Good Dimensional Stability	• Low Temperature Resistant
	• Good Electrical Properties	
Applications	• Hospital Goods	• Aircraft Applications
	• Industrial Applications	• Medical Devices
	• Connectors	• Medical/Healthcare Applications
	• Dental Applications	• Electrical/Electronic Applications
RoHS Compliance	• RoHS Compliant	
Processing Method	• Injection Molding	

Physical Properties	Typical Value	Unit	Test Method
Specific Gravity	1.32	g/cm^3	ASTM D792
Density	1.31	g/cm^3	ASTM D792
Moisture Absorption (24hr, 50% RH)	0.2	%	ASTM D570
Moisture Absorption (23℃, 50% RH)	0.3	%	ISO 62
Mold Shrinkage			ASTM D955
Flow, 24 hrs	0.7 to 0.9	%	
Transverse Flow, 24 hrs	0.8 to 1	%	
Wear Factor Washer	185	10^-10 in^5-min/ft-lb-hr	ASTM D3702 Modified
Dynamic COF	0.32		ASTM D3702 Modified
Static COF	0.29		ASTM D3702 Modified

Mechanical Properties	Typical Value	Unit	Test Method
Tensile Modulus, 50 mm/min	3680	MPa	ASTM D638
Tensile Modulus, 1 mm/min	2900	MPa	ISO 527
Tensile Strength, yield	107	MPa	ASTM D638
Tensile Strength, yield, Type I 5 mm/min	88	MPa	ASTM D638
Tensile Strength, break, Type I 5 mm/min	79	MPa	ASTM D638
Tensile Strength, yield 5 mm/min	83	MPa	ISO 527
Tensile Strength, break 5 mm/min	81	MPa	ISO 527
Tensile Elongation, yield, Type I 5 mm/min	6.4	%	ASTM D638

Tensile Elongation, break, Type I 5 mm/min	14	%	ASTM D638
Tensile Elongation, yield 5 mm/min	6.2	%	ISO 527
Tensile Elongation, break 5 mm/min	10	%	ISO 527
Flexural Modulus	3360	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min 50 mm span	3000	MPa	ASTM D790
Flexural Modulus, 2 mm/min	2880	MPa	ISO 178
Flexural Strength	141	MPa	ASTM D790
Flexural Strength	105	MPa	ISO 178

Impact Properties	Typical Value	Unit	Test Method
Notched Izod Impact, 23℃	54	J/m	ASTM D256
Unnotched Izod Impact, 23℃	576	J/m	ASTM D4812
Notched Izod Impact 80*10*4, 23℃	5.2	kJ/m^2	ISO 180/1A
Unnotched Izod Impact 80*10*4, 23℃	37.4	kJ/m^2	ISO 180/1U
Instrumented Impact Total Energy 23℃	6	J	ASTM D3763
Multiaxial Impact	1.4	J	ISO 6603

Thermal Properties	Typical Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
1.82MPa, Unannealed, 3.2mm	193	℃	
0.45 MPa, Unannealed, 3.2mm	203	℃	
CLTE			ASTM D696
-30℃ to 30℃, Flow	4.80E-05	cm/cm/℃	
-30℃ to 30℃, Xflow	4.70E-05	cm/cm/℃	
Deflection Temperature Under Load			
/Bf,0.45 MPa Flatw 80*10*4 sp=64mm	201	℃	ISO 75/Bf
/Af,1.8 MPa Flatw 80*10*4 sp=64mm	186	℃	ISO 75/Af

Processing Information	Typical Value	Unit
Maximum Moisture Content	0.02	%
Melt Temperature	360 to 365	℃
Mold Temperature	120 to 150	℃
Drying Temperature	120 to 150	℃
Drying Time	4 to 6	hr
Front Temperature	365 to 375	℃
Middle Temperature	355 to 365	℃
Rear Temperature	345 to 355	℃
Back Pressure	0.3 to 0.7	MPa
Screw Speed	60 to 100	rpm

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.
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