

# Tepla® T8000 EC

**Material Description:**

Tepla® T8000 EC is an electrically conductive compound based on Polyetherimide(PEI) resin.

General		
Material Status	• Commercial: Active	
Availability	• Asia Pacific	• North America
	• Europe	• Latin America
	• Middle East	• Africa
Features	• Low Extractable	• 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	• Electric Conduction
	• Hospital Goods	• Aircraft Applications
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	1.3	g/cm <sup>3</sup>	ASTM D792
Density	1.29	g/cm <sup>3</sup>	ASTM D792
Mold Shrinkage			ASTM D955
Flow, 24 hrs	0.3 to 0.5	%	
Across Flow, 24 hrs	0.5 to 0.7	%	
Moisture Absorption (24hr, 50% RH)	0.35	%	ASTM D570
Moisture Absorption (23°C, 50% RH)	0.25	%	ISO 62

Mechanical Properties	Typical Value	Unit	Test Method
Tensile Modulus, 1 mm/min	3800	MPa	ISO 527
Tensile Modulus, 50 mm/min	4000	MPa	ASTM D638
Tensile Strength, break, Type I 5 mm/min	76	MPa	ASTM D638
Tensile Elongation, break, Type I 5 mm/min	2.2	%	ASTM D638
Tensile Strength, break 5 mm/min	88	MPa	ISO 527
Tensile Elongation, break 5 mm/min	2.7	%	ISO 527
Flexural Modulus 2 mm/min	3850	MPa	ISO 178
Flexural Modulus, 1.3 mm/min 50 mm span	4200	MPa	ASTM D790
Flexural Stress, break, 1.3 mm/min 50 mm span	134	MPa	ASTM D790
Flexural Stress	163	MPa	ISO 178

Impact Properties	Typical Value	Unit	Test Method
Notched Izod Impact, 23°C	17	J/m	ASTM D256
Unnotched Izod Impact, 23°C	343	J/m	ASTM D4812

Notched Izod Impact 80*10*4, 23°C	2.3 kJ/m <sup>2</sup>	ISO 180/1A
Unnotched Izod Impact 80*10*4, 23°C	20.7 kJ/m <sup>2</sup>	ISO 180/1U
Instrumented Impact Total Energy 23°C	3.21 J	ASTM D3763
Multiaxial Impact	1.12 J	ISO 6603

Electrical Properties	Typical Value	Unit	Test Method
Surface Resistivity	1E2 to 1E5	Ohm	ASTM D257

Thermal Properties	Typical Value	Unit	Test Method
Deflection Temperature Under Load 1.82MPa, Unannealed, 3.2mm	201	°C	ASTM D648
/Af,1.8 MPa Flatw 80*10*4 sp=64mm	192	°C	ISO 75/Af
0.45 MPa, Unannealed, 3.2 mm	205	°C	ASTM D648
/Bf,0.45 MPa Flatw 80*10*4 sp=64mm	203	°C	ISO 75/Bf
CLTE			ASTM D696
-30°C to 30°C, Flow	4.40E-05	cm/cm/°C	
-30°C to 30°C, Xflow	4.50E-05	cm/cm/°C	

Processing Information	Typical Value	Unit
Maximum Moisture Content	0.02	%
Melt Temperature	360 to 365	°C
Mold Temperature	120 to 150	°C
Drying Temperature	120 to 150	°C
Drying Time	4 to 6	hr
Front Temperature	365 to 375	°C
Middle Temperature	355 to 365	°C
Rear Temperature	345 to 355	°C

## NFD ADVANCED COMPOSITES

Tepla® T8000 EC

### 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的热处理温度或时间。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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