

Matreial Data Sheet

技术数据表

NFD Composite Material (Jiangsu) Co., Ltd

Tepla® T8010GF

Material Description:

Tepla ® T8010GF is a Polyether Imide (PEI) product filled with 10% glass fiber. It can be processed by injection molding. Primary characteristic: copolymer.

Density/Specific Gravity 1.35 g/cm³ ASTM D79 Molding Shrinkage - Flow (3.18 mm) 0.6 % ASTM D95 Water Absorption (24 hr) 0.24 % ASTM D57 Hardness Typical Value Unit Test Metho Rockwell Hardness (R-Scale) 121 ASTM D78 Mechanical Properties Typical Value Unit Test Metho Tensile Strength (Break) 122 MPa ASTM D63 Tensile Elongation (Break) 7 % ASTM D63 Flexural Modulus 5300 MPa ASTM D79 Flexural Strength 195 MPa ASTM D79 Impact Properties Typical Value Unit Test Metho Notched Izod Impact (23°C, 3.18 mm) 55 J/m ASTM D48 Unnotched Izod Impact (23°C, 3.18 mm) 1316 J/m ASTM D48 Electrical Properties Typical Value Unit Test Metho Volume Resistivity 1E+16 ohms.cm ASTM D25 Dielectric Strength 20 kV/mm ASTM D45 Method A (Short-Time) Typical Value Unit Test Metho	General				
Availability		Commercial: Active			
Middle East		Asia Pacific		North America	
Middle East	Availability	Europe		Latin America	
Copolymer	,			Africa	
Copolymer	Filler/Reinforcement	Glass Fiber, 10% Filler by W	eight //		
Hear Resistant Properties		-		Flame Retardant	
Fatgue Resistant	F .			Creep Resistant	
Appearance • Colors Available Forms • Pellets Forms • Pellets Processing Method • Injection Molding Physical Properties Typical Value Unit Test Metho Density/Specific Gravity 1.35 g/cm³ ASTM D'95 Molding Shrinkage - Flow (3.18 mm) 0.6 % ASTM D'95 Molding Shrinkage - Flow (3.18 mm) 0.6 % ASTM D'95 Molding Shrinkage - Flow (3.18 mm) 0.6 % ASTM D'95 Molding Shrinkage - Flow (3.18 mm) 0.6 % ASTM D'95 Molding Shrinkage - Flow (3.18 mm) 0.6 % ASTM D'95 Molding Shrinkage - Flow (3.18 mm) 0.6 % ASTM D'95 Materia Absorption (24 hr) 0.24 % ASTM D'95 Hardness Typical Value Unit Test Metho Rockwell Hardness (R-Scale) 121 ASTM D'78 Mechanical Properties Typical Value Unit Test Metho Tensile Elongation (Break) 7 % ASTM D'85 Flexural Modulus 5300 MPa ASTM D'85 Flexural Strength 195 MPa ASTM D'79 Impact Properties Typical Value Unit Test Metho Notched Izod Impact (23°C, 3.18 mm) 1316 J/m ASTM D'81 Impact Properties Typical Value Unit Test Metho Volume Resistivity 1E+16 ohms cm ASTM D'84 Electrical Properties Typical Value Unit Test Metho Volume Resistivity 1E+16 ohms cm ASTM D'84 Electrical Properties Typical Value Unit Test Metho Deflection Temperature Under Load 0.45 MPa, Unannealed 223 °C Unit Test Metho Deflection Temperature Under Load 0.45 MPa, Unannealed 221 °C Unit Test Metho Deflection Temperature Under Load 0.45 MPa, Unannealed 221 °C Unit Test Metho Deflection Temperature Under Load 0.45 MPa, Unannealed 221 °C Unit Test Metho Deflection Temperature Under Load 0.45 MPa, Unannealed 221 °C Unit Test Metho Deflection Temperature Under Load 0.45 MPa, Unannealed 221 °C Unit Test Metho Deflection Temperature Under Load 0.45 MPa, Unannealed 221 °C Unit Test Metho Deflection Temperature 0.5 AE-5 cm/cm/°C ASTM D'89 Processing Information 1990 Vicil 141 °C Drying Time 3 hr Rear Temperature 357 to 391 °C	reatures	Fatigue Resistant		Chemical Resistant	
Processing Method Processing Method Injection Molding		Hydrolysis Stable			
Processing Method Pellets	Appearance	Colors Available			
Processing Method • Injection Molding		Pellets			
Density/Specific Gravity					
Density/Specific Gravity					
Molding Shrinkage - Flow (3.18 mm) 0.6 % ASTM D95 Water Absorption (24 hr) 0.24 % ASTM D57 Hardness Typical Value Unit Test Metho Rockwell Hardness (R-Scale) 121 ASTM D78 Mechanical Properties Typical Value Unit Test Metho Tensile Strength (Break) 122 MPa ASTM D63 Flexural Modulus 5300 MPa ASTM D79 Flexural Strength 195 MPa ASTM D79 Impact Properties Typical Value Unit Test Metho Notched Izod Impact (23°C, 3.18 mm) 55 J/m ASTM D48 Electrical Properties Typical Value Unit Test Metho Volume Resistivity 1E+16 ohmscm ASTM D25 Dielectric Strength 20 kV/mm ASTM D25 Method A (Short-Time) 20 kV/mm ASTM D64 Thermal Properties Typical Value Unit Test Metho Las MPa_Unannealed 223 °C C CLTE - Flow 5.4E-5 °Cm/cm/°C ASTM D69 Processing Information Typical Value Unit Un					Test Method
Molding Shrinkage - Flow (3.18 mm) 0.6 % ASTM D95 Water Absorption (24 hr) 0.24 % ASTM D57 Hardness Typical Value Unit Test Metho Rockwell Hardness (R-Scale) 121 ASTM D78 Mechanical Properties Typical Value Unit Test Metho Tensile Strength (Break) 122 MPa ASTM D63 Flexural Modulus 5300 MPa ASTM D79 Flexural Strength 195 MPa ASTM D79 Impact Properties Typical Value Unit Test Metho Notched Izod Impact (23°C, 3.18 mm) 55 J/m ASTM D48 Electrical Properties Typical Value Unit Test Metho Volume Resistivity 1E+16 ohmscm ASTM D25 Dielectric Strength 20 kV/mm ASTM D25 Method A (Short-Time) 20 kV/mm ASTM D64 Thermal Properties Typical Value Unit Test Metho Las MPa_Unannealed 223 °C C CLTE - Flow 5.4E-5 °Cm/cm/°C ASTM D69 Processing Information Typical Value Unit Un		1.35	g/cm ³		ASTM D792
Hardness Typical Value Unit Test Metho	Molding Shrinkage - Flow (3.18 mm)	0.6	%		ASTM D955
Rockwell Hardness (R-Scale) 121 ASTM D78 Mechanical Properties Typical Value Unit Test Metho Tensile Strength (Break) 122 MPa ASTM D63 Tensile Elongation (Break) 7 % ASTM D63 Flexural Modulus 5300 MPa ASTM D79 Flexural Strength 195 MPa ASTM D79 Impact Properties Typical Value Unit Test Metho Notched Izod Impact (23 °C, 3.18 mm) 55 J/m ASTM D48 Electrical Properties Typical Value Unit Test Metho Volume Resistivity 1E+16 ohms.cm ASTM D48 Electrical Properties Typical Value Unit Test Metho Volume Resistivity 1E+16 ohms.cm ASTM D4 Thermal Properties Typical Value Unit Test Metho Deflection Temperature Under Load 223 °C 1.8 MPa,Unannealed 223 °C 1.8 MPa,Unannealed 221 °C CLTE - Flow	Water Absorption (24 hr)	0.24	%		ASTM D570
Rockwell Hardness (R-Scale) 121 ASTM D78 Mechanical Properties Typical Value Unit Test Metho Tensile Strength (Break) 122 MPa ASTM D63 Tensile Elongation (Break) 7 % ASTM D63 Flexural Modulus 5300 MPa ASTM D79 Flexural Strength 195 MPa ASTM D79 Impact Properties Typical Value Unit Test Metho Notched Izod Impact (23 °C, 3.18 mm) 55 J/m ASTM D48 Electrical Properties Typical Value Unit Test Metho Volume Resistivity 1E+16 ohms.cm ASTM D48 Electrical Properties Typical Value Unit Test Metho Volume Resistivity 1E+16 ohms.cm ASTM D4 Thermal Properties Typical Value Unit Test Metho Deflection Temperature Under Load 223 °C 1.8 MPa,Unannealed 223 °C 1.8 MPa,Unannealed 221 °C CLTE - Flow	Hardness	Turning Malue	Unit		Toot Mothers
Mechanical Properties Typical Value Unit Test Metho Tensile Strength (Break) 122 MPa ASTM D63 Tensile Elongation (Break) 7 % ASTM D63 Flexural Modulus 5300 MPa ASTM D79 Flexural Strength 195 MPa ASTM D79 Impact Properties Typical Value Unit Test Metho Notched Izod Impact (23°C, 3.18 mm) 55 J/m ASTM D25 Unnotched Izod Impact (23°C, 3.18 mm) 1316 J/m ASTM D48 Electrical Properties Typical Value Unit Test Metho Volume Resistivity 1E+16 ohms.cm ASTM D25 Dielectric Strength 20 kV/mm ASTM D25 Method A (Short-Time) 20 kV/mm ASTM D64 0.45 MPa,Unannealed 223 °C 1.8 MPa,Unannealed 223 °C 1.8 MPa,Unannealed 221 °C CLTE - Flow 5.4E-5 cm/cm/°C ASTM D69 Processing Information			Unit		
Tensile Strength (Break) 122 MPa ASTM D63 Tensile Elongation (Break) 7 % ASTM D63 Flexural Modulus 5300 MPa ASTM D79 Flexural Strength 195 MPa ASTM D79 Impact Properties Typical Value Unit Test Metho Notched Izod Impact (23°C, 3.18 mm) 55 J/m ASTM D45 Unnotched Izod Impact (23°C, 3.18 mm) 1316 J/m ASTM D48 Electrical Properties Typical Value Unit Test Metho Volume Resistivity 1E+16 ohms-cm ASTM D49 Dielectric Strength 20 kV/mm ASTM D4 Method A (Short-Time) 20 kV/mm ASTM D64 0.45 MPa,Unannealed 223 °C 1.8 MPa,Unannealed 221 °C CLTE - Flow 5.4E-5 cm/cm/°C ASTM D69 Processing Information Typical Value Unit Drying Time 3 hr Astronger Rear Temperature 357 to 391 <td< td=""><td>ROCKWell Hardness (R-Scale)</td><td>121</td><td></td><td></td><td>ASTIVI D785</td></td<>	ROCKWell Hardness (R-Scale)	121			ASTIVI D785
Tensile Strength (Break) 122 MPa ASTM D63 Tensile Elongation (Break) 7 % ASTM D63 Flexural Modulus 5300 MPa ASTM D79 Flexural Strength 195 MPa ASTM D79 Impact Properties Typical Value Unit Test Metho Notched Izod Impact (23°C, 3.18 mm) 55 J/m ASTM D45 Unnotched Izod Impact (23°C, 3.18 mm) 1316 J/m ASTM D48 Electrical Properties Typical Value Unit Test Metho Volume Resistivity 1E+16 ohms-cm ASTM D49 Dielectric Strength 20 kV/mm ASTM D4 Method A (Short-Time) 20 kV/mm ASTM D64 0.45 MPa,Unannealed 223 °C 1.8 MPa,Unannealed 221 °C CLTE - Flow 5.4E-5 cm/cm/°C ASTM D69 Processing Information Typical Value Unit Drying Time 3 hr Astronger Rear Temperature 357 to 391 <td< td=""><td>Mechanical Properties</td><td>Typical Value</td><td>Unit</td><td></td><td>Test Method</td></td<>	Mechanical Properties	Typical Value	Unit		Test Method
Tensile Elongation (Break) 7 % ASTM D63 Flexural Modulus 5300 MPa ASTM D79 Flexural Strength 195 MPa ASTM D79 Impact Properties Typical Value Unit Test Metho Notched Izod Impact (23°C, 3.18 mm) 55 J/m ASTM D25 Unnotched Izod Impact (23°C, 3.18 mm) 1316 J/m ASTM D481 Electrical Properties Typical Value Unit Test Metho Volume Resistivity 1E+16 ohms·cm ASTM D25 Dielectric Strength Method A (Short-Time) 20 kV/mm ASTM D14 Thermal Properties Typical Value Unit Test Metho 0.45 MPa,Unannealed 223 °C 1.8 MPa,Unannealed 221 °C CLTE - Flow 5.4E-5 cm/cm/°C ASTM D69 Processing Information Typical Value Unit Drying Temperature Uniter Load 0.45 m/c ASTM D69 Processing Information Typical Value Unit Drying Temperature 357 to 391 °C Middle Temperature 357 to 391 °C					
Flexural Modulus 5300 MPa ASTM D79 Flexural Strength 195 MPa ASTM D79 Impact Properties Typical Value Unit Test Metho Notched Izod Impact (23°C, 3.18 mm) 55 J/m ASTM D25 Unnotched Izod Impact (23°C, 3.18 mm) 1316 J/m ASTM D481 Electrical Properties Typical Value Unit Test Metho Volume Resistivity 1E+16 ohms-cm ASTM D25 Dielectric Strength Action Action ASTM D25 Method A (Short-Time) 20 kV/mm ASTM D14 Thermal Properties Typical Value Unit Test Metho Deflection Temperature Under Load ASTM D64 0.45 MPa,Unannealed 223 °C 1.8 MPa,Unannealed 221 °C CLTE - Flow 5.4E-5 cm/cm/°C ASTM D69 Processing Information Typical Value Unit Drying Temperature 141 °C Drying Temperature 357 to 391 °C Middle Temperature 357 to 391 °C					
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Impact Properties Typical Value Unit Test Metho Notched Izod Impact (23℃, 3.18 mm) 55 J/m ASTM D25 Unnotched Izod Impact (23℃, 3.18 mm) 1316 J/m ASTM D481 Electrical Properties Typical Value Unit Test Metho Volume Resistivity 1E+16 ohms·cm ASTM D25 Dielectric Strength 20 kV/mm ASTM D4 Method A (Short-Time) 20 kV/mm ASTM D4 Thermal Properties Typical Value Unit Test Metho Deflection Temperature Under Load 223 ℃ C 1.8 MPa,Unannealed 221 ℃ C CLTE - Flow 5.4E-5 cm/cm/℃ ASTM D69 Processing Information Typical Value Unit Drying Temperature 141 ℃ C Drying Time 3 hr Rear Temperature 357 to 391 ℃ Middle Temperature 357 to 391 ℃ C					ASTM D790
Notched Izod Impact (23°C, 3.18 mm) Unnotched Izod Impact (23°C, 3.18 mm) In the second Impact Imp					
Unnotched Izod Impact (23°C,3.18 mm) Issue Iteratical Properties Iteratical Properties Volume Resistivity Iteratical Properties Dielectric Strength Method A (Short-Time) Intermal Properties Deflection Temperature Under Load 0.45 MPa,Unannealed 1.8 MPa,Unannealed 221 °C CLTE - Flow Iteratical Properties Typical Value Unit Test Method ASTM D14 ASTM D64 223 °C CLTE - Flow Iteratical Properties Typical Value Unit Test Method ASTM D64 ASTM D69 ASTM D69 Processing Information Typical Value Unit Drying Temperature 141 °C Drying Temperature 357 to 391 °C Middle Temperature 357 to 391 °C Middle Temperature 357 to 391 °C	Impact Properties	Typical Value	Unit		Test Method
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Volume Resistivity1E+16 ohms·cmASTM D25Dielectric Strength Method A (Short-Time)20 kV/mmASTM D14Thermal PropertiesTypical ValueUnitTest MethoDeflection Temperature Under Load 0.45 MPa,Unannealed223 °CASTM D641.8 MPa,Unannealed221 °CCCLTE - Flow5.4E-5 cm/cm/°CASTM D69Processing InformationTypical ValueUnitDrying Temperature141 °CDrying Time3 hrRear Temperature357 to 391 °CMiddle Temperature357 to 391 °C	Unnotched Izod Impact (23℃,3.18 mm)	1316	J/m		ASTM D4812
Volume Resistivity1E+16 ohms·cmASTM D25Dielectric Strength Method A (Short-Time)20 kV/mmASTM D14Thermal PropertiesTypical ValueUnitTest MethoDeflection Temperature Under Load 0.45 MPa,Unannealed223 °CASTM D641.8 MPa,Unannealed221 °CCCLTE - Flow5.4E-5 cm/cm/°CASTM D69Processing InformationTypical ValueUnitDrying Temperature141 °CDrying Time3 hrRear Temperature357 to 391 °CMiddle Temperature357 to 391 °C	Floor deal Boson with	T -:11/-1 -	11.2		Total Martin of
Dielectric Strength Method A (Short-Time)20 kV/mmASTM D14Thermal PropertiesTypical ValueUnitTest MethodDeflection Temperature Under Load 0.45 MPa,Unannealed 1.8 MPa,Unannealed 2.1 °C223 °C 2.1 °C221 °CCLTE - Flow5.4E-5 cm/cm/°CASTM D69Processing Information Drying TemperatureTypical Value 141 °CUnitDrying Time Rear Temperature3 hrRear Temperature357 to 391 °CMiddle Temperature357 to 391 °C					
Method A (Short-Time) Thermal Properties Typical Value Unit Test Method ASTM D64 Deflection Temperature Under Load 223 °C ASTM D64 0.45 MPa,Unannealed 221 °C C CLTE - Flow 5.4E-5 cm/cm/°C ASTM D69 Processing Information Typical Value Unit Drying Temperature 141 °C Drying Time 3 hr Rear Temperature 357 to 391 °C Middle Temperature 357 to 391 °C		1E+10	onms·cm		ASTM D257
Thermal PropertiesTypical ValueUnitTest MethoDeflection Temperature Under LoadASTM D640.45 MPa,Unannealed223 ℃1.8 MPa,Unannealed221 ℃CLTE - Flow5.4E-5 cm/cm/℃ASTM D69Processing InformationTypical ValueUnitDrying Temperature141 ℃Drying Time3 hrRear Temperature357 to 391 ℃Middle Temperature357 to 391 ℃	<u> </u>	20	kV/mm		ASTM D149
Deflection Temperature Under Load 0.45 MPa,Unannealed 1.8 MPa,Unannealed 221 °C CLTE - Flow 221 °C CLTE - Flow Typical Value Unit Drying Temperature 141 °C Drying Time 3 hr Rear Temperature 357 to 391 °C Middle Temperature 357 to 391 °C	Method A (Short-Time)				
Deflection Temperature Under Load 0.45 MPa,Unannealed 1.8 MPa,Unannealed 221 °C CLTE - Flow 221 °C CLTE - Flow Typical Value Unit Drying Temperature 141 °C Drying Time 3 hr Rear Temperature 357 to 391 °C Middle Temperature 357 to 391 °C	Thermal Properties	Typical Value	Unit		Test Method
0.45 MPa,Unannealed 223 °C 1.8 MPa,Unannealed 221 °C CLTE - Flow 5.4E-5 cm/cm/°C ASTM D69 Processing Information Typical Value Unit Drying Temperature 141 °C Drying Time 3 hr Rear Temperature 357 to 391 °C Middle Temperature 357 to 391 °C	·	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			ASTM D648
1.8 MPa,Unannealed 221 °C CLTE - Flow 5.4E-5 cm/cm/°C ASTM D69 Processing Information Typical Value Unit Drying Temperature 141 °C Drying Time 3 hr Rear Temperature 357 to 391 °C Middle Temperature 357 to 391 °C	·	223	$^{\circ}$ C		
CLTE - Flow 5.4E-5 cm/cm/℃ ASTM D69 Processing Information Typical Value Unit Drying Temperature 141 ℃ Drying Time 3 hr Rear Temperature 357 to 391 ℃ Middle Temperature 357 to 391 ℃					
Drying Temperature141 °CDrying Time3 hrRear Temperature357 to 391 °CMiddle Temperature357 to 391 °C					ASTM D696
Drying Temperature141 °CDrying Time3 hrRear Temperature357 to 391 °CMiddle Temperature357 to 391 °C					
Drying Time 3 hr Rear Temperature 357 to 391 °C Middle Temperature 357 to 391 °C					
Rear Temperature 357 to 391 °C Middle Temperature 357 to 391 °C					
Middle Temperature 357 to 391 °C	, ,				
	·				
Front reinperature 357 to 391 °C					
· · · · · · · · · · · · · · · · · · ·	rront remperature	357 to 391	C		

Processing (Melt) Temp	354 to 388	8 ℃
Mold Temperature	135 to 163	$^{\circ}$ $^{\circ}$ C
Back Pressure	0.345 to 0.689	MPa
Screw Speed	50 to 100	rpm

NFD ADVANCED COMPOSITES

Tepla® T8010GF

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。

COMPANY/公司:

Welcome to NFD, where the concept of "New Formula Designer" is upheld and scientific innovation and production are intertwined. Whether you are a designer, engineer or procurement expert, we can help you expand your business and get new inspiration. We adhere to the core values of credibility and integrity, cooperation, efficiency, and innovation, and always put our customers first. Compared with our competitors, we focus on providing more advanced technical formulation, better quality products, more efficient solutions and more thoughtful after-sales services. We understand the markets, the products, and you even more.

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

