

**Matreial Data Sheet** 

技术数据表

NFD Composite Material (Jiangsu) Co., Ltd

Test Method

# Hepla® H2030GF

# Material Description:

**Electrical Properties** 

Hepla® H2030GF is a Polyphenylene Ether(PPE) product filled with 30% glass fiber. Characteristics include: Medium Heat Resistance

Material Status  - Commercial: Active - Asia Pacific - Europe - Middle East  Filler/Reinforcement - Glass Fiber, 30% Filler by Weight - Chemical Resistant - High Stiffness - Hydrolysis Stable  Uses - Automotive Under the Hood - RoHS Compliance - RoHS Compliant - Processing Method - Injection Molding  Physical Properties - Density - Density - Density - Density - Moisture Absorption - (Equilibrium, 50% RH) - Moisture Absorption - (24 hr, 50% RH) - Molding Shrinkage - Flow - (3.20 mm) - Molding Shrinkage - Across Flow - (3.20	North America     Latin America     Africa      High Heat Resistance     Electrical Insulation     Good Dimensional Stability      Test Methodal ASTM D7      ASTM D5      NFD Methodal NFD Methoda
Availability  Peturope  Middle East  Filler/Reinforcement  Glass Fiber, 30% Filler by Weight  Chemical Resistant  High Stiffness  Hydrolysis Stable  Uses  RoHS Compliance  Processing Method  Processing M	Latin America     Africa      High Heat Resistance     Electrical Insulation     Good Dimensional Stability      Test Methodas ASTM D7      ASTM D5      NFD Methodas ASTM D5  NFD Methodas ASTM D5
• Middle East  Filler/Reinforcement • Glass Fiber, 30% Filler by Weight • Chemical Resistant • High Stiffness • Hydrolysis Stable Uses • Automotive Under the Hood • RoHS Compliance • RoHS Compliant • Injection Molding  Processing Method • Injection Molding  Physical Properties  Density  Typical Value  Unit  (Equilibrium, 50% RH)  Moisture Absorption (24 hr, 50% RH)  Molding Shrinkage - Flow (3.20 mm)  Molding Shrinkage - Across Flow (3.20 mm)  Typical Value  Unit	Africa      High Heat Resistance     Electrical Insulation     Good Dimensional Stability      Test Methodas ASTM D7      ASTM D5  ASTM D5  NFD Methodas ASTM D5  NFD Methodas ASTM D5
Filler/Reinforcement  Features  Features  Features  Features  Features  Features  Processing Method  Frocessing Method  Frocess	High Heat Resistance     Electrical Insulation     Good Dimensional Stability      Test Methods ASTM D7      ASTM D5  ASTM D5  NFD Methods NFD Me
Features  - Chemical Resistant - High Stiffness - Hydrolysis Stable  Uses - Automotive Under the Hood - RoHS Compliance - RoHS Compliant - Injection Molding  Processing Method  - RoHS Compliant - Injection Molding  - In	Electrical Insulation     Good Dimensional Stability  Test Meth ASTM D7 ASTM D5  ASTM D5  NFD Meth NFD Meth
Features  High Stiffness Hydrolysis Stable  Automotive Under the Hood RoHS Compliance Processing Method  Injection Molding  Physical Properties Physical Properties  Typical Value Unit Density  Moisture Absorption (Equilibrium, 50% RH)  Moisture Absorption (24 hr, 50% RH)  Molding Shrinkage - Flow (3.20 mm)  Molding Shrinkage - Across Flow (3.20 mm)  Typical Value Unit Tensile Stress, yield, Type I	Electrical Insulation     Good Dimensional Stability  Test Meth ASTM D7 ASTM D5 ASTM D5 NFD Meth NFD Meth
Hydrolysis Stable  Automotive Under the Hood  RoHS Compliance Processing Method  Injection Molding  Physical Properties  Density  Moisture Absorption (Equilibrium, 50% RH)  Molding Shrinkage - Flow (3.20 mm)  Molding Shrinkage - Across Flow (3.20 mm)  Hardness Rockwell Hardness (R-Scale)  Physical Properties  Typical Value Unit  0.5 %  0.65 to 0.85 %  Typical Value Unit	• Good Dimensional Stability  Test Meth ASTM D7 ASTM D5 ASTM D5 NFD Meth NFD Meth
Processing Method  Processing Me	Test Meth ASTM D7 ASTM D5 ASTM D5 NFD Meth
RoHS Compliance Processing Method  Processing Metho	ASTM D7 ASTM D5 ASTM D5 NFD Meth
Processing Method  Physical Properties Density Density 1.33 g/cm³ Moisture Absorption (Equilibrium, 50% RH) Moisture Absorption (24 hr, 50% RH) Molding Shrinkage - Flow (3.20 mm) Molding Shrinkage - Across Flow (3.20 mm)  Hardness Rockwell Hardness (R-Scale)  Mechanical Properties Tensile Stress, yield, Type I  Typical Value Unit Tensile Stress, yield, Type I	ASTM D7 ASTM D5 ASTM D5 NFD Meth
Physical Properties  Density  Moisture Absorption (Equilibrium, 50% RH)  Moisture Absorption (24 hr, 50% RH)  Molding Shrinkage - Flow (3.20 mm)  Molding Shrinkage - Across Flow (3.20 mm)  Molding Shrinkage - Across Flow (3.20 mm)  Typical Value  Unit  Tensile Stress, yield, Type I	ASTM D7 ASTM D5 ASTM D5 NFD Meth
Density  Moisture Absorption (Equilibrium, 50% RH)  Moisture Absorption (24 hr, 50% RH)  Molding Shrinkage - Flow (3.20 mm)  Molding Shrinkage - Across Flow (3.20 mm)  Molding Shrinkage - Across Flow (3.20 mm)  Typical Value  Mechanical Properties  Typical Value  Unit  Tensile Stress, yield, Type I	ASTM D7 ASTM D5 ASTM D5 NFD Meth
Moisture Absorption (Equilibrium, 50% RH)  Moisture Absorption (24 hr, 50% RH)  Molding Shrinkage - Flow (3.20 mm)  Molding Shrinkage - Across Flow (3.20 mm)  Molding Shrinkage - Across Flow (3.20 mm)  Typical Value Unit Tensile Stress, yield, Type I	ASTM D5 ASTM D5 NFD Meth
Moisture Absorption (Equilibrium, 50% RH)  Moisture Absorption (24 hr, 50% RH)  Molding Shrinkage - Flow (3.20 mm)  Molding Shrinkage - Across Flow (3.20 mm)  Molding Shrinkage - Across Flow (3.20 mm)  Typical Value  Mechanical Properties  Typical Value Unit  Tensile Stress, yield, Type I	ASTM D5 NFD Meth NFD Meth
Moisture Absorption (24 hr, 50% RH)  Molding Shrinkage - Flow (3.20 mm)  Molding Shrinkage - Across Flow (3.20 mm)  Molding Shrinkage - Across Flow (3.20 mm)  Typical Value Unit Rockwell Hardness (R-Scale)  Mechanical Properties Typical Value Unit Tensile Stress, yield, Type I	ASTM D5 NFD Meth NFD Meth
(24 hr, 50% RH)  Molding Shrinkage - Flow (3.20 mm)  Molding Shrinkage - Across Flow (3.20 mm)  Molding Shrinkage - Across Flow (3.20 mm)  Typical Value Unit Rockwell Hardness (R-Scale)  Mechanical Properties Tensile Stress, yield, Type I	NFD Meth
(24 hr, 50% RH)  Molding Shrinkage - Flow (3.20 mm)  Molding Shrinkage - Across Flow (3.20 mm)  0.65 to 0.85 %  Hardness Rockwell Hardness (R-Scale)  Typical Value Unit Tensile Stress, yield, Type I	NFD Meth
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(3.20 mm)  Hardness Typical Value Unit Rockwell Hardness (R-Scale) 120  Mechanical Properties Typical Value Unit Tensile Stress, yield, Type I 151 MPa	
Rockwell Hardness (R-Scale)  Mechanical Properties Typical Value Unit Tensile Stress, yield, Type I	Test Meth
Rockwell Hardness (R-Scale)  Mechanical Properties Typical Value Unit Tensile Stress, yield, Type I	TCSt With
Mechanical Properties Typical Value Unit Tensile Stress, yield, Type I	ASTM D7
Tensile Stress, yield, Type I	7.01111 27
IST MPA	Test Meth
	ASTM D6
5.0 mm/min	ASTIVI DO
Tensile Stress, break, Type I 158 MPa	ASTM D6
5.0 mm/min	ASTIVI DE
Tensile Strain, break, Type I	ASTM D6
5.0 mm/min	ASTM DO
Flexural Modulus, 2.6 mm/min	ACTM DZ
100 mm Span 8706 MPa	ASTM D7
Flexural Stress, yield, 2.6 mm/min 251 MPa	ASTM D7
100 mm Span	ASTIVI D7
npact Properties Typical Value Unit	Test Meth
Notched Ized Impact	
80*10*4, 23°C 113 kJ/m <sup>2</sup>	ISO 1
Notehod Izad Impact	
80*10*4, -30°C 81.3 kJ/m <sup>2</sup>	ISO 1
lammability Typical Value Unit	Test Meth
•	
Flame Rating(1.5mm) HB	UL

Typical Value Unit

Arc Resistance, Tungsten Electrode	PLC 6	ASTM D495
Comparative Tracking Index (CTI)	PLC 2	UL 746
High Amp Arc Ignition (HAI)	PLC 2	UL 746
High Voltage Arc Tracking Rate (HVTR)	PLC 1	UL 746
Hot-wire Ignition (HWI)	PLC 0	UL 746

Thermal Properties	Typical Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
1.8MPa, Unannealed	241	${\mathbb C}$	
0.45 MPa, Unannealed	254	${\mathbb C}$	
Vicat Softening Temperature	249	$^{\circ}$	ASTM D1525
CLTE - Flow (-20 to 150°C)	2E-5 to 3.1E-5		ASTM E831
RTI Elec	50	${\mathbb C}$	UL 746
RTI Imp	50	$^{\circ}$	UL 746
RTI Str	50	${\mathbb C}$	UL 746

Processing Information Typical Value	Unit
Melt Temperature 281 to 305	$^{\circ}\!\mathbb{C}$
Nozzle Temperature 277 to 299	$^{\circ}\!\mathbb{C}$
Mold Temperature 78 to 120	$^{\circ}\!\mathbb{C}$
Drying Temperature 93 to 108	$^{\circ}\!\mathbb{C}$
Drying Time 3 to 4	hr
Drying Time, Maximum 8	hr
Front Temperature 276 to 305	$^{\circ}\!\mathbb{C}$
Middle Temperature 270 to 305	$^{\circ}\!\mathbb{C}$
Rear Temperature 265 to 305	$^{\circ}\!\mathbb{C}$
Back Pressure 0.345 to 1.38	MPa
Screw Speed 20 to 100	rpm
Vent Depth 0.013 to 0.038	mm

## NFD ADVANCED COMPOSITES

Hepla® H2030GF

#### 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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### 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

