

**Matreial Data Sheet** 

技术数据表 NFD Composite Material (Jiangsu) Co., Ltd

# Hepla® H8040CF

# **Material Description:**

Hepla ® H8040CF is a Polyamide MXD6 (Nylon MXD6) material filled with 40% carbon fiber. Primary attribute of Hepla ® H8040CF: high strength and rigidity, outstanding surface gloss, and excellent creep resistance.

Density       1.4 g/cm³       ISO 1183         Molding Shrinkage ¹(3.00mm)       0.10 to 0.40 %         Mechanical Properties       Typical Value       Unit       Test Method         Tensile Stress       256 MPa       ISO 527-2         Tensile Strain (Break)       1.4 %       ISO 527-2         Flexural Modulus       27000 MPa       ISO 178         Flexural Stress       360 MPa       ISO 178         Impact Properties       Typical Value Charpy Notched Impact Strength       Typical Value Unit       Test Method         Charpy Notched Impact Strength       6 kJ/m²       ISO 179/1eA         Flammability       Typical Value HB       UL 94         Fleetrical Properties       Typical Value Unit       Test Method         Surface Resistivity       1.0E+2 to 1.0E+4 ohms       IEC 60093         Volume Resistivity       1.0E+2 to 1.0E+4 ohms·cm       IEC 60093         Thermal Properties       Typical Value Unit       Test Method         Heat Deflection Temperature       230 °C       ISO 75-2/A         1.8 MPa,Unannealed       230 °C       ISO 75-2/A	General			
Availability	Material Status	<ul> <li>Commercial: Active</li> </ul>		
Middle East		Asia Pacific		North America
Filter/Reinforcement	Availability	Europe		Latin America
Chemical Resistant				Africa
Good Dimensional Stability	Filler/Reinforcement	<ul> <li>Carbon Fiber, 40% Filler by \</li> </ul>	Weight	
High Strength   Outstanding Surface Finish   Outstanding Finish Surface Finish   Outstanding Finish Surface		<ul> <li>Chemical Resistant</li> </ul>		Creep Resistant
High Strength   Outstanding Surface Finish   Outstanding Surface Finish Surfa	Features	<ul> <li>Good Dimensional Stability</li> </ul>		High Flow
Appliance		High Strength		<ul> <li>Low Moisture Absorption</li> </ul>
Automotive Applications   Automotive Electronics		<ul> <li>Outstanding Surface Finish</li> </ul>		<ul> <li>Ultra High Stiffness</li> </ul>
Uses  - Bushings - Automotive Under the Hood - Camera Applications - Cams - Camera Applications - Camera Applications - Camera Applications - Metal Replacement - Gears - Industrial Applications - Processing Method - Injection Molding - Processing Information - Processing Information - Automatical Processing Information - Automatical Processing Information - Processing Information		Appliance Components		Appliances
Camera Applications   Cams		<ul> <li>Automotive Applications</li> </ul>		<ul> <li>Automotive Electronics</li> </ul>
Cell Phones		Bushings		<ul> <li>Automotive Under the Hood</li> </ul>
Lawn and Garden Equipment   • Gears     Industrial Applications   • Furniture     Machine/Mechanical Parts   • Power/Other Tools     Electrical/Electronic Applications   • Furniture     Machine/Mechanical Parts   • Power/Other Tools     Electrical/Electronic Applications     Appearance   • Natural Color     Processing Method   • Injection Molding	Uses	<ul> <li>Camera Applications</li> </ul>		• Cams
Industrial Applications   Furniture		Cell Phones		<ul> <li>Metal Replacement</li> </ul>
Machine/Mechanical Parts   Power/Other Tools		<ul> <li>Lawn and Garden Equipmen</li> </ul>	nt	<ul> <li>Gears</li> </ul>
Physical Properties Typical Value Unit Test Method  Charpy Notched Impact Strength  Typical Value  Charpy Notched Impact Strength  Typical Value  Test Method  Density  1.4 g/cm³ ISO 1183  Molding Shrinkage ¹ (3.00mm)  O.10 to 0.40 %  Mechanical Properties  Typical Value  Tensile Stress  256 MPa  S0 527-2  Flexural Modulus  27000 MPa  ISO 178  Flexural Stress  360 MPa  ISO 178  Impact Properties  Typical Value  Charpy Notched Impact Strength  Typical Value  Charpy Notched Impact Strength  Typical Value  Totil Test Method  Kl/m²  ISO 179/1eA  Electrical Properties  Typical Value  Unit  Test Method  Charby Notched Impact Strength  Typical Value  Unit  Test Method  Charby Notched Impact Strength  Typical Value  Unit  Test Method  Charby Notched Impact Strength  Typical Value  Unit  Test Method  Charby Notched Impact Strength  Typical Value  Unit  Test Method  UL 94  Electrical Properties  Typical Value  Unit  Test Method  Typical Value  Unit  Test Method  Ohms  IEC 60093  Thermal Properties  Typical Value  Unit  Test Method  Ohms  IEC 60093  Thermal Properties  Typical Value  Unit  Test Method  Ohms IEC 60093  Thermal Properties  Typical Value  Unit  Test Method  Ohms IEC 60093  Thermal Properties  Typical Value  Unit  Test Method  Ohms IEC 60093  Thermal Properties  Typical Value  Unit  Test Method  Ohms IEC 60093  Thermal Properties  Typical Value  Unit  Test Method  Ohms IEC 60093				
Appearance • Natural Color Processing Method • Injection Molding  Physical Properties Typical Value Unit Test Method Density 1.4 g/cm³ ISO 1183  Molding Shrinkage ¹ (3.00mm) 0.10 to 0.40 %  Mechanical Properties Typical Value Unit Test Method Tensile Stress 256 MPa ISO 527-2 Tensile Strain (Break) 1.4 % ISO 527-2 Tensile Strain (Break) 27000 MPa ISO 527-2 Flexural Modulus 27000 MPa ISO 178  Flexural Stress 360 MPa ISO 178  Impact Properties Typical Value Unit Test Method Charpy Notched Impact Strength 6 kJ/m² ISO 179/1eA  Flammability Typical Value Unit Test Method Charpy Notched Impact Strength B UL 94  Electrical Properties Typical Value Unit Test Method Surface Resistivity 1.0E+2 to 1.0E+4 ohms IEC 60093  Volume Resistivity 1.0E+2 to 1.0E+4 ohms IEC 60093  Thermal Properties Typical Value Unit Test Method Unit Test Method UL 94  Electrical Properties Typical Value Unit Test Method Surface Resistivity 1.0E+2 to 1.0E+4 ohms IEC 60093  Thermal Properties Typical Value Unit Test Method Heat Deflection Temperature 230 C ISO 75-2/A		<ul> <li>Machine/Mechanical Parts</li> </ul>		<ul> <li>Power/Other Tools</li> </ul>
Processing Method  Injection Molding  Physical Properties  Typical Value  Density  1.4 g/cm³  ISO 1183  Molding Shrinkage ¹(3.00mm)  O.10 to 0.40 %  Mechanical Properties  Typical Value  Test Method  Tensile Stress  256 MPa  ISO 527-2  Tensile Strain (Break)  1.4 %  ISO 527-2  Flexural Modulus  27000 MPa  ISO 178  Flexural Stress  360 MPa  Impact Properties  Typical Value  Charpy Notched Impact Strength  Typical Value  Flammability  Typical Value  Flammability  Typical Value  Flame Rating  HB  Unit  Test Method  Surface Resistivity  1.0E+2 to 1.0E+4  Ohms  IEC 60093  Thermal Properties  Typical Value  Unit  Test Method  Unit  Unit  Test Method  Unit  Unit  Test Method  Unit  Unit  Test Method  Unit  Uni			tions	
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Density	Processing Method	Injection Molding		
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Molding Shrinkage \$\frac{1}{3.00mm}\$0.10 to 0.40 \$\frac{1}{3.00mm}\$Mechanical PropertiesTypical ValueUnitTest MethodTensile Stress256 MPaISO 527-2Tensile Strain (Break)1.4 \$\frac{1}{3.00mm}\$ISO 527-2Flexural Modulus27000 MPaISO 178Flexural Stress360 MPaISO 178Impact PropertiesTypical Value Charpy Notched Impact Strength0.6 kl/m²ISO 179/1eAFlammabilityTypical Value Flame RatingUnitTest MethodFlame RatingHBUL 94Electrical PropertiesTypical Value UnitTest MethodSurface Resistivity1.0E+2 to 1.0E+4 ohmsIEC 60093Volume Resistivity1.0E+2 to 1.0E+4 ohms-cmIEC 60093Thermal PropertiesTypical Value UnitTest MethodHeat Deflection Temperature 1.8 MPa,Unannealed230 °CISO 75-2/AProcessing InformationTypical Value UnitUnit	Density	1.4	g/cm <sup>3</sup>	ISO 1183
Tensile Stress 256 MPa ISO 527-2 Tensile Strain (Break) 1.4 % ISO 527-2 Tensile Strain (Break) 27000 MPa ISO 178 Flexural Modulus 27000 MPa ISO 178 Flexural Stress 360 MPa ISO 178  Impact Properties Typical Value Unit Test Method Charpy Notched Impact Strength 6 kJ/m² ISO 179/1eA  Flammability Typical Value Unit Test Method UL 94  Flam Rating HB UL 94  Electrical Properties Typical Value Unit Test Method Online Resistivity 1.0E+2 to 1.0E+4 Ohms IEC 60093  Volume Resistivity 1.0E+2 to 1.0E+4 Ohms IEC 60093  Thermal Properties Typical Value Unit Test Method Ohms IEC 60093  Thermal Properties Typical Value Unit Test Method Ohms IEC 60093  Thermal Properties Typical Value Unit Test Method Ohms IEC 60093  Thermal Properties Typical Value Unit Test Method Ohms IEC 60093  Thermal Properties Typical Value Unit Test Method Ohms IEC 60093  Thermal Properties Typical Value Unit Test Method Ohms IEC 60093  Thermal Properties Typical Value Unit Test Method Ohms IEC 60093  Thermal Properties Typical Value Unit Test Method Ohms IEC 60093  Thermal Properties Typical Value Unit Test Method Ohms IEC 60093  Thermal Properties Typical Value Unit Test Method Ohms IEC 60093  Thermal Properties Typical Value Unit Test Method Ohms IEC 60093  Thermal Properties Typical Value Unit Test Method Ohms IEC 60093	Molding Shrinkage <sup>1</sup> (3.00mm)			
Tensile Stress 256 MPa ISO 527-2 Tensile Strain (Break) 1.4 % ISO 527-2 Tensile Strain (Break) 27000 MPa ISO 178 Flexural Modulus 27000 MPa ISO 178 Flexural Stress 360 MPa ISO 178  Impact Properties Typical Value Unit Test Method Charpy Notched Impact Strength 6 kJ/m² ISO 179/1eA  Flammability Typical Value Unit Test Method UL 94  Flam Rating HB UL 94  Electrical Properties Typical Value Unit Test Method Online Resistivity 1.0E+2 to 1.0E+4 Ohms IEC 60093  Volume Resistivity 1.0E+2 to 1.0E+4 Ohms IEC 60093  Thermal Properties Typical Value Unit Test Method Ohms IEC 60093  Thermal Properties Typical Value Unit Test Method Ohms IEC 60093  Thermal Properties Typical Value Unit Test Method Ohms IEC 60093  Thermal Properties Typical Value Unit Test Method Ohms IEC 60093  Thermal Properties Typical Value Unit Test Method Ohms IEC 60093  Thermal Properties Typical Value Unit Test Method Ohms IEC 60093  Thermal Properties Typical Value Unit Test Method Ohms IEC 60093  Thermal Properties Typical Value Unit Test Method Ohms IEC 60093  Thermal Properties Typical Value Unit Test Method Ohms IEC 60093  Thermal Properties Typical Value Unit Test Method Ohms IEC 60093  Thermal Properties Typical Value Unit Test Method Ohms IEC 60093  Thermal Properties Typical Value Unit Test Method Ohms IEC 60093	Mechanical Properties	Typical Value	Unit	Test Method
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Impact Properties   Typical Value   Unit   Test Method	Tensile Strain (Break)	1.4	%	ISO 527-2
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Volume Resistivity1.0E+2 to 1.0E+4ohms⋅cmIEC 60093Thermal PropertiesTypical ValueUnitTest MethodHeat Deflection Temperature 1.8 MPa,Unannealed230 ℃ISO 75-2/AProcessing InformationTypical ValueUnit				
Heat Deflection Temperature 1.8 MPa,Unannealed  Typical Value Unit				
Heat Deflection Temperature 1.8 MPa,Unannealed  230 ℃  ISO 75-2/A  Processing Information  Typical Value Unit	Thermal Properties	Typical Value	Unit	Test Method
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•	1.8 MPa,Unannealed	230	C	ISO 75-2/A
•	Processing Information	Typical V <u>alue</u>	Unit	
	<u> </u>			

Mold Temperature	120 to 140	$^{\circ}$	
Drying Temperature	120	$^{\circ}\!\mathbb{C}$	
Drying Time	0.5 to 1.5	hr	
Rear Temperature	250 to 260	$^{\circ}\!\mathbb{C}$	
Front Temperature	260 to 290	$^{\circ}\!\mathbb{C}$	

Injection Pressure: 50 to 70% Injection Velocity: 50 to 70%

#### Notes

<sup>1</sup> 50x70x3 mm

## NFD ADVANCED COMPOSITES

Hepla® H8040CF

#### 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.

Modeling Marker (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:**

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