

**Matreial Data Sheet** 

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

# Hepla® H7105MS

### **Material Description:**

Hepla ® H7105MS is a Polyamide 6 (Nylon 6) product filled with 5% Molybdenum Disulfide.Characteristics include:Lubricated,Wear Resistant.

Material Status	General				
Asia Pacific   North America		Commercial: Active			
Purpose   Latin America	Waterial Status			North America	
Middle East	Availability				
Additive					
Lubricated   Good Processability	Additive		vricant: 5%	AIIICa	
Chemical Resistant	Additive		illeant. 5%	• Cood Processability	
Wear Resistant	Features				
RoHS Compliance				• Impact Resistant	
Processing Method         Injection Molding           Physical Properties         Typical Value g/cm³         Unit         Test Method g/cm³           Density/Specific Gravity         1.18 g/cm³         ASTM D792           Moisture Content         0.2 %         **           Molding Shrinkage - Flow (3.20 mm)         1 to 1.5 %         **           Mechanical Properties         Typical Value         Unit         Test Method           Tensile Modulus         3600 MPa         ASTM D638           Tensile Strength         78 MPa         ASTM D638           Tensile Elongation(Yield)         4 to 6 %         ASTM D638           Flexural Modulus         3520 MPa         ASTM D790           Flexural Strength         118 MPa         ASTM D790           Impact Properties         Typical Value         Unit         Test Method           Notched Izod Impact(3.2mm)         44 J/m         ASTM D4812           Flammability         Typical Value         Unit         Test Method           Volume Resistivity         <1.0E+16	PoUS Compliance				
Physical Properties         Typical Value         Unit         Test Method           Density/Specific Gravity         1.18 g/cm³         ASTM D792           Moisture Content         0.2 %         Cast Molding Shrinkage - Flow (3.20 mm)         1 to 1.5 %         ASTM D995           Mechanical Properties         Typical Value         Unit         Test Method           Tensile Modulus         3600 MPa         ASTM D633           Tensile Strength         78 MPa         ASTM D633           Tensile Elongation(Yield)         4 to 6 %         ASTM D633           Flexural Modulus         3520 MPa         ASTM D790           Flexural Strength         118 MPa         ASTM D790           Impact Properties         Typical Value         Unit         Test Method           Notched Izod Impact(3.2mm)         44 J/m         ASTM D345           Unnotched Izod Impact(3.2mm)         660 J/m         ASTM D4812           Flammability         Typical Value         Unit         Test Method           Volume Resistivity         Typical Value         Unit         Test Method           Volume Resistivity         Typical Value         Unit         Test Method           Volume Resistivity         Typical Value         Unit         Test Method	· · · · · · · · · · · · · · · · · · ·	•			
Density/Specific Gravity	Processing Method	• Injection Molaling			
Moisture Content         0.2         Molding Shrinkage - Flow (3.20 mm)         1 to 1.5         Mechanical Properties         ASTM D955           Mechanical Properties         Typical Value         Unit         Test Method           Tensile Modulus         3600         MPa         ASTM D638           Tensile Strength         78         MPa         ASTM D638           Flexural Modulus         3520         MPa         ASTM D638           Flexural Strength         118         MPa         ASTM D790           Impact Properties         Typical Value         Unit         Test Method           Notched Izod Impact(3.2mm)         44         J/m         ASTM D4812           Flammability         Typical Value         Unit         Test Method           Flame Rating(1.5mm)         HB         UL 94           Electrical Properties         Typical Value         Unit         Test Method           Volume Resistivity         <1.0E+16	Physical Properties				Test Method
Moisture Content         0.2         Molding Shrinkage - Flow (3.20 mm)         1 to 1.5         Mechanical Properties         ASTM D955           Mechanical Properties         Typical Value         Unit         Test Method           Tensile Modulus         3600         MPa         ASTM D638           Tensile Strength         78         MPa         ASTM D638           Flexural Modulus         3520         MPa         ASTM D638           Flexural Strength         118         MPa         ASTM D790           Impact Properties         Typical Value         Unit         Test Method           Notched Izod Impact(3.2mm)         44         J/m         ASTM D4812           Flammability         Typical Value         Unit         Test Method           Flame Rating(1.5mm)         HB         UL 94           Electrical Properties         Typical Value         Unit         Test Method           Volume Resistivity         <1.0E+16	Density/Specific Gravity	1.18	g/cm <sup>3</sup>		ASTM D792
Mechanical Properties         Typical Value         Unit         Test Method           Tensile Modulus         3600         MPa         ASTM D638           Tensile Strength         78         MPa         ASTM D638           Tensile Elongation(Yield)         4 to 6         %         ASTM D638           Flexural Modulus         3520         MPa         ASTM D790           Flexural Strength         118         MPa         ASTM D790           Impact Properties         Typical Value         Unit         Test Method           Notched Izod Impact(3.2mm)         44         J/m         ASTM D4812           Unnotched Izod Impact(3.2mm)         660         J/m         ASTM D4812           Flammability         Typical Value         Unit         Test Method           Flame Rating(1.5mm)         HB         UL 94           Electrical Properties         Typical Value         Unit         Test Method           Volume Resistivity         <1.0E+16	Moisture Content				
Tensile Modulus         3600         MPa         ASTM D638           Tensile Strength         78         MPa         ASTM D638           Tensile Elongation(Yield)         4 to 6         %         ASTM D638           Textural Modulus         3520         MPa         ASTM D638           Flexural Strength         118         MPa         ASTM D790           Impact Properties         Typical Value         Unit         Test Method           Notched Izod Impact(3.2mm)         44         J/m         ASTM D256           Unnotched Izod Impact(3.2mm)         660         J/m         ASTM D4812           Flammability         Typical Value         Unit         Test Method           Flame Rating(1.5mm)         HB         UL 94           Electrical Properties         Typical Value         Unit         Test Method           Volume Resistivity         <1.0E+16	Molding Shrinkage - Flow (3.20 mm)	1 to 1.5	%		ASTM D955
Tensile Modulus         3600         MPa         ASTM D638           Tensile Strength         78         MPa         ASTM D638           Tensile Elongation(Yield)         4 to 6         %         ASTM D638           Textural Modulus         3520         MPa         ASTM D638           Flexural Strength         118         MPa         ASTM D790           Impact Properties         Typical Value         Unit         Test Method           Notched Izod Impact(3.2mm)         44         J/m         ASTM D256           Unnotched Izod Impact(3.2mm)         660         J/m         ASTM D4812           Flammability         Typical Value         Unit         Test Method           Flame Rating(1.5mm)         HB         UL 94           Electrical Properties         Typical Value         Unit         Test Method           Volume Resistivity         <1.0E+16	Mechanical Properties	Typical Value	Unit		Test Method
Tensile Strength         78         MPa         ASTM D638           Tensile Elongation(Yield)         4 to 6 %         ASTM D638           Flexural Modulus         3520         MPa         ASTM D790           Flexural Strength         118         MPa         ASTM D790           Impact Properties         Typical Value         Unit         Test Method           Notched Izod Impact(3.2mm)         44         J/m         ASTM D256           Unnotched Izod Impact(3.2mm)         660         J/m         ASTM D4812           Flammability         Typical Value         Unit         Test Method           Flame Rating(1.5mm)         HB         UL 94           Electrical Properties         Typical Value         Unit         Test Method           Volume Resistivity         <1.0E+16					
Tensile Elongation(Yield)         4 to 6 %         ASTM D638           Flexural Modulus         3520 MPa         ASTM D790           Flexural Strength         118 MPa         ASTM D790           Impact Properties         Typical Value Unit         Test Method           Notched Izod Impact(3.2mm)         44 J/m         ASTM D256           Unnotched Izod Impact(3.2mm)         660 J/m         ASTM D4812           Flammability         Typical Value Unit         Test Method           Flame Rating(1.5mm)         HB         UL 94           Electrical Properties         Typical Value Unit         Test Method           Volume Resistivity         <1.0E+16 Ohms•cm					
Flexural Modulus 3520 MPa ASTM D790 Flexural Strength 118 MPa ASTM D790  Impact Properties Typical Value Unit Test Method Notched Izod Impact (3.2mm) 44 J/m ASTM D256 Unnotched Izod Impact (3.2mm) 660 J/m ASTM D4812  Flammability Typical Value Unit Test Method Flame Rating (1.5mm) HB UL 94  Electrical Properties Typical Value Unit Test Method Volume Resistivity <a href="#"></a>					
Flexural Strength			MPa		ASTM D790
Notched Izod Impact(3.2mm)  44 J/m  ASTM D256 Unnotched Izod Impact(3.2mm)  660 J/m  ASTM D4812  Flammability  Typical Value Flame Rating(1.5mm)  Flame Rating(1.5mm)  Typical Value Unit  Test Method Volume Resistivity  Typical Value Unit  Test Method Volume Resistivity  Typical Value Unit  Test Method ASTM D25  Thermal Properties  Typical Value Unit  Test Method 1.8 MPa, Unannealed  Typical Value Unit  Test Method 1.8 MPa, Unannealed  Typical Value Unit  Injection Pressure  68.9 to 103 MPa  Processing (Melt) Temp  243 to 279 Mold Temperature  54 to 93 C Drying Temperature  82 C Drying Temperature  82 C Drying Time	Flexural Strength	118	MPa		ASTM D790
Notched Izod Impact(3.2mm)  44 J/m  ASTM D256 Unnotched Izod Impact(3.2mm)  660 J/m  ASTM D4812  Flammability  Typical Value Flame Rating(1.5mm)  Flame Rating(1.5mm)  Typical Value Unit  Test Method Volume Resistivity  Typical Value Unit  Test Method Volume Resistivity  Typical Value Unit  Test Method ASTM D25  Thermal Properties  Typical Value Unit  Test Method 1.8 MPa, Unannealed  Typical Value Unit  Test Method 1.8 MPa, Unannealed  Typical Value Unit  Injection Pressure  68.9 to 103 MPa  Processing (Melt) Temp  243 to 279 Mold Temperature  54 to 93 C Drying Temperature  82 C Drying Temperature  82 C Drying Time	Impact Properties	Typical Value	Unit		Test Method
Flammability       Typical Value       Unit       Test Method         Flame Rating(1.5mm)       HB       UL 94         Electrical Properties       Typical Value       Unit       Test Method         Volume Resistivity       <1.0E+16					
Flame Rating(1.5mm)       HB       UL 94         Electrical Properties       Typical Value       Unit       Test Method         Volume Resistivity       <1.0E+16	. , ,				ASTM D4812
Flame Rating(1.5mm)       HB       UL 94         Electrical Properties       Typical Value       Unit       Test Method         Volume Resistivity       <1.0E+16	Flammak III.	Tomical Malue	1 local		Took Modes of
Electrical Properties       Typical Value       Unit       Test Method         Volume Resistivity       <1.0E+16			Unit		
Volume Resistivity<1.0E+16Ohms•cmASTM D25Thermal PropertiesTypical ValueUnitTest MethodDeflection Temperature Under Load 1.8 MPa, Unannealed80 °CASTM D648Processing InformationTypical Value 68.9 to 103UnitInjection Pressure68.9 to 103MPaProcessing (Melt) Temp243 to 279 °CMold Temperature54 to 93 °CDrying Temperature82 °CDrying Time2 hr	Flame Rating(1.5mm)	HR			UL 94
Volume Resistivity<1.0E+16Ohms•cmASTM D25Thermal PropertiesTypical ValueUnitTest MethodDeflection Temperature Under Load 1.8 MPa, Unannealed80 °CASTM D648Processing InformationTypical Value 68.9 to 103UnitInjection Pressure68.9 to 103MPaProcessing (Melt) Temp243 to 279 °CMold Temperature54 to 93 °CDrying Temperature82 °CDrying Time2 hr	Electrical Properties	Typical Value	Unit		Test Method
Deflection Temperature Under Load 1.8 MPa, Unannealed80 °CASTM D648Processing InformationTypical Value (Bige 1)UnitInjection Pressure68.9 to 103 MPaProcessing (Melt) Temp243 to 279 °CMold Temperature54 to 93 °CDrying Temperature82 °CDrying Time2 hr		<1.0E+16	Ohms•cm		ASTM D257
Deflection Temperature Under Load 1.8 MPa, Unannealed80 °CASTM D648Processing InformationTypical Value (Bige 1)UnitInjection Pressure68.9 to 103 MPaProcessing (Melt) Temp243 to 279 °CMold Temperature54 to 93 °CDrying Temperature82 °CDrying Time2 hr	Thermal Properties	Typical Value	Unit		Test Method
Processing Information Injection Pressure Frocessing (Melt) Temp Frocessing (Melt) Temp Frocessing (Melt) Temp Frocessing Temperature Fro					
Injection Pressure68.9 to 103MPaProcessing (Melt) Temp243 to 279°CMold Temperature54 to 93°CDrying Temperature82°CDrying Time2hr	•	80	$^{\circ}$		ASTM D648
Injection Pressure68.9 to 103MPaProcessing (Melt) Temp243 to 279°CMold Temperature54 to 93°CDrying Temperature82°CDrying Time2hr					
Processing (Melt) Temp         243 to 279 °C           Mold Temperature         54 to 93 °C           Drying Temperature         82 °C           Drying Time         2 hr	_				
Mold Temperature54 to 93°CDrying Temperature82°CDrying Time2hr					
Drying Temperature82°CDrying Time2hr					
Drying Time 2 hr	<u> </u>				
, ,					
Dew Point -18 ℃					
	Dew Point	-18	$^{\circ}\!\mathbb{C}$		

## NFD ADVANCED COMPOSITES

Hepla® H7105MS

#### 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:**

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