

Hepla® H2000 CM

Material Description:

Hepla® H2000 CM Resin is a blend of Polyphenylene Ether(PPE) + Polyamide(PA) resin that is mineral filled, and suitable for injection molding. The conductivity level is optimized to allow for primer-less electrostatic painting. Hepla® H2000 CM has improved impact/elongation and the mineral content enables the material to be used in structural applications replacing metal or thermoset resins. The material is only available in black.

General

Material Status	<ul style="list-style-type: none"> Commercial: Active
Availability	<ul style="list-style-type: none"> Asia Pacific Europe Middle East North America Latin America Africa
Filler/Reinforcement	<ul style="list-style-type: none"> Mineral
Features	<ul style="list-style-type: none"> Conductive Paintable Good Dimensional Stability Heat Resistant Good Impact Resistance Hydrolysis Stable Creep Resistant
Uses	<ul style="list-style-type: none"> Metal Replacement Structural Parts
Appearance	<ul style="list-style-type: none"> Black
RoHS Compliance	<ul style="list-style-type: none"> RoHS Compliant
Processing Method	<ul style="list-style-type: none"> Injection Molding

Physical Properties	Typical Value	Unit	Test Method
Specific Gravity	1.24	g/cm ³	ASTM D792
Density	1.24	g/cm ³	ISO 1183
Moisture Absorption (Equilibrium, 23°C, 50% RH)	0.7	%	ISO 62
Moisture Absorption (Saturation, 23°C)	3.6	%	ISO 62
Molding Shrinkage - Flow (3.20 mm)	0.7 to 0.9	%	NFD Method
Melt Mass-Flow Rate (MFR) (280°C/5.0 kg)	16	g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR) (220°C/5.0 kg)	14	cm ³ /10min	ISO 1133

Mechanical Properties	Typical Value	Unit	Test Method
Tensile Modulus	4921	MPa	ISO 527-2/1
Tensile Modulus, 5.0 mm/min	4673	MPa	ASTM D638
Tensile Stress, yield, Type I 5.0 mm/min	65.6	MPa	ASTM D638
Tensile Stress, break, Type I 5.0 mm/min	63.4	MPa	ASTM D638
Tensile Strain, yield, Type I 5.0 mm/min	2.9	%	ASTM D638
Tensile Strain, break, Type I 5.0 mm/min	3.8	%	ASTM D638
Tensile Stress, yield	62.3	MPa	ISO 527-2/5
Tensile Stress, break	62.3	MPa	ISO 527-2/5
Tensile Strain, yield	2	%	ISO 527-2/5
Tensile Strain, break	4.8	%	ISO 527-2/5
Flexural Modulus, 2.0 mm/min	4627	MPa	ISO 178

Flexural Modulus, 50.0 mm Span

1100 MPa

ASTM D790

1.3 mm/min	4.199	MPa	ASTM D790
Flexural Stress, yield 2.0 mm/min	111.3	MPa	ASTM D790
Flexural Stress, break 50.0 mm Span, 1.3 mm/min	110.5	MPa	ASTM D790

Impact Properties	Typical Value	Unit	Test Method
Notched Izod Impact, 23°C	39.7	J/m	ASTM D256
Unnotched Izod Impact, -30°C	31.5	J/m	ASTM D4812
Notched Izod Impact 80*10*4 , 23°C	4.3	kJ/m ²	ISO 180/1A
Unnotched Izod Impact 80*10*4 , -30°C	3.5	kJ/m ²	ISO 180/1A
Charpy Notched Impact Strength 80*10*4, 23°C	3.8	kJ/m ²	ISO 179/1eA
Instrumented Dart Impact 23°C, Total Energy	7	J	ASTM D3763

Thermal Properties	Typical Value	Unit	Test Method
Deflection Temperature Under Load /Bf,0.45 MPa Flatw 80*10*4 sp=64mm	184	°C	ISO 75/Bf
0.45MPa,Unannealed, 3.2mm	185	°C	ASTM D648
Vicat Softening Temperature	185	°C	ASTM D1525, ISO 306/B50
Vicat Softening Temperature	188	°C	ISO 306/B120
CLTE			ASTM E831, ISO 11359-2
Flow : -40 to 40°C	6.00E-05	1/°C	
Transverse : -40 to 40°C	6.50E-05	1/°C	

Processing Information	Typical Value	Unit
Maximum Moisture Content	0.07	%
Suggested Shot Size	30 to 50	%
Melt Temperature	277 to 300	°C
Nozzle Temperature	277 to 300	°C
Mold Temperature	66 to 94	°C
Drying Temperature	93 to 107	°C
Drying Time	3 to 4	hr
Drying Time, Maximum	8	hr
Front Temperature	270 to 300	°C
Middle Temperature	266 to 300	°C
Rear Temperature	260 to 300	°C
Back Pressure	0.345 to 1.38	MPa
Screw Speed	20 to 100	rpm
Vent Depth	0.013 to 0.038	mm

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。

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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.

上列数据仅作参考用途, 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

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