

Hepla® H9040GF

Material Description:

Hepla® H9040GF is a 40% glass fibre reinforced polyphthalamide(PPA) with high rigidity and strength, as well as high temperature and chemical resistance.Applications are parts with tight dimensional tolerances even under high mechanical load.

General

Material Status	• Commercial: Active	
Availability	• Asia Pacific	• North America
	• Europe	• Latin America
	• Middle East	• Africa
Filler/Reinforcement	• Glass Fibr, 40% Filler by Weight	
Features	• Chemical Resistant	• High Heat Resistance
	• Good Dimensional Stability	• High Rigidity
	• High Strength	
Appearance	• Black	• Natural Color

Physical Properties	Typical Value	Unit	Test Method
Density (23℃)	1.5	g/cm ³	ISO 1183
Spiral Flow ^{1,2}	30	cm	NFD Method
Molding Shrinkage			ISO 294-4
Across Flow	0.8	%	
Flow	0.2	%	
Humidity Absorption - 62% RH (70℃)	1.1	%	ISO 1110

Hardness	Typical Value	Unit	Test Method
Ball Indentation Hardness (H 961/30)	330	MPa	ISO 2039-1

Mechanical Properties	Typical Value	Unit	Test Method
Tensile Modulus	15500	MPa	ISO 527-2/1
Tensile Stress (Break)	260	MPa	ISO 527-2/5
Tensile Strain (Break)	2.4	%	ISO 527-2/5
Flexural Modulus ³	14500	MPa	ISO 178
Flexural Stress ³	345	MPa	ISO 178
Flexural Strain at Break ⁴	2.7	%	ISO 178

Impact Properties	Typical Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-30℃	11	kJ/m ²	
23℃	11	kJ/m ²	
Charpy Unnotched Impact Strength			ISO 179/1eU
-30℃	60	kJ/m ²	
23℃	75	kJ/m ²	

Electrical Properties	Typical Value	Unit	Test Method
Comparative Tracking Index Solution A	600	V	IEC 60112

Thermal Properties	Typical Value	Unit	Test Method
Heat Deflection Temperature			
0.45 MPa, Unannealed	310	℃	ISO 75-2/B
1.8 MPa, Unannealed	285	℃	ISO 75-2/A
8.0 MPa, Unannealed	205	℃	ISO 75-2/C
Melting Temperature ⁵	313	℃	DIN EN 11357-1

Temperature Index		IEC 60216
50% Loss of Tensile Strength 20000 hr	150 to 160 °C	
50% Loss of Tensile Strength 5000 hr	170 to 180 °C	

Flammability	Typical Value	Unit	Test Method
Burning Rate ⁶ (1.00 mm)	< 100	mm/min	FMVSS 302
Flame Rating (0.8 mm)	HB		UL 94
Glow Wire Flammability Index 1.6 mm	960	°C	IEC 60695-2-12

Additional Information	Typical Value	Unit	Test Method
Reinforcement Content	40	%	ISO 1172

Notes

¹ Mold Temperature: 130°C, Melt Temperature: 340°C, Injection Pressure: 750 bar

² cross section of flow spiral: 7 mm x 3.5 mm

³ 2.0 mm/min

⁴ 2 mm/min

⁵ 10°C/min

⁶ >1 mm

NFD ADVANCED COMPOSITES

Hepla® H9040GF

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的热熔温度或时间。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.

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