

Heppla® H9065GM H

Material Description:

Heppla® H9065GM H is a 65% glass and mineral-reinforced polyphthalamide (PPA) designed to be cost-effective in applications requiring high stiffness, good dimensional stability and good retention of stiffness at elevated temperatures. This grades also exhibits a high deflection temperature and flexural modulus.

General

Material Status	• Commercial: Active
Availability	• Asia Pacific
	• Europe
	• Middle East
Filler/Reinforcement	• Glass\Mineral, 65% Filler by Weight
Additive	• Heat Stabilizer
Features	• Chemical Resistant
	• Good Dimensional Stability
	• High Heat Resistance
	• Lubricated
Uses	• Creep Resistant
	• Low CLTE
	• Low Warpage
Appearance	• Ultra High Stiffness
	• Automotive Applications
	• Automotive Under the Hood
RoHS Compliance	• Housings
Forms	• Industrial Parts
Processing Method	• Pump Parts
Multi-Point Data	• Black
	• RoHS Compliant
	• Pellets
	• Injection Molding
	• Viscosity vs. Shear Rate (ISO 11403-2)

Physical Properties	Typical Value	Unit	Test Method
Density/Specific Gravity	1.9	g/cm ³	ISO 1183/A
Molding Shrinkage			ASTM D955
Flow	0.3	%	
Across Flow	0.5	%	
Water Absorption (24 hr)	0.1	%	ASTM D570

Mechanical Properties	Typical Value	Unit	Test Method
Tensile Modulus			
	20700	MPa	ASTM D638
23°C	19700	MPa	ISO 527-2
100°C	15400	MPa	ISO 527-2
150°C	5720	MPa	ISO 527-2
175°C	5100	MPa	
Tensile Stress			
Break,23°C	138	MPa	ISO 527-2
Break,100°C	91.7	MPa	ISO 527-2
Break,150°C	46.2	MPa	ISO 527-2
Break,175°C	32.4	MPa	ISO 527-2
	131	MPa	ASTM D638
Tensile Elongation			
Break	1.2	%	ASTM D638
Break,23°C	1	%	ISO 527-2
Break,100°C	1.3	%	ISO 527-2
Break,150°C	2.4	%	ISO 527-2
Break,175°C	1.8	%	ISO 527-2
Flexural Modulus			
	17900	MPa	ASTM D790

23°C	9100 MPa	ISO 178
100°C	6830 MPa	ISO 178
150°C	2480 MPa	ISO 178
175°C	2280 MPa	ISO 178
Flexural Strength		
	210 MPa	ASTM D790
23°C	211 MPa	ISO 178
100°C	163 MPa	ISO 178
150°C	69.6 MPa	ISO 178
175°C	55.8 MPa	ISO 178
Compressive Strength(13mm)	189 MPa	ASTM D695
Shear Strength	71 MPa	ASTM D732

Impact Properties	Typical Value	Unit	Test Method
Notched Izod Impact			
	37	J/m	ASTM D256
23°C	4	kJ/m ²	ISO 180/1A
Unnotched Izod Impact			
	410	J/m	ASTM D256
23°C	32	kJ/m ²	ISO 180/1U
Charpy Notched Impact Strength			
23°C	3.4	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength			
23°C	44	kJ/m ²	ISO 179/1eU

Electrical Properties	Typical Value	Unit	Test Method
Volume Resistivity	4E+14	Ohms-cm	ASTM D257
Arc Resistance	125	sec	ASTM D495
Comparative Tracking Index(CTI)	600	V	UL 746

Thermal Properties	Typical Value	Unit	Test Method
Deflection Temperature Under Load			
1.8 MPa, Unannealed	271	°C	ISO 75-2/A
Melting Temperature	311	°C	ASTM D570,ISO 11357-3
CLTE			
Flow : 0 to 100°C	2.00E-05	cm/cm/°C	ASTM E831
Flow : 100 to 200°C	1.70E-05	cm/cm/°C	
Transverse : 0 to 100°C	3.70E-05	cm/cm/°C	
Transverse : 100 to 200°C	8.10E-05	cm/cm/°C	

Processing Information	Typical Value	Unit
Processing (Melt) Temp	321 to 343	°C
Mold Temperature	135	°C
Drying Temperature	120	°C
Drying Time	4	hr
Suggested Max Moisture	0.045	%
Hopper Temperature	79	°C
Rear Temperature	304 to 318	°C
Front Temperature	316 to 329	°C

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.

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