Hepla® H7200 T

Material Description:

Hepla® H7200 T is a unreinforced Polyamide 66 (Nylon 66) product.Characteristics include:Super Toughened.

General		
Material Status	• Commercial: Active	
Availability	• Asia Pacific	• North America
	• Europe	• Latin America
	• Middle East	• Africa
Additive	• Mold Release Agent	
Features	• High Toughness	• Impact Resistance
	• Fatigue Resistant	• Wear Resistant
Applications	• Aircraft Applications	• Consumer Applications
	• Automotive Applications	• Industrial Applications
RoHS Compliance	• Contact Manufacturer	
Forms	• Pellets	
Processing Method	• Injection Molding	• Film Extrusion
	• Sheet Extrusion Molding	• Extrusion
	• Coating	• Casting
	• Profile Extrusion Molding	
Multipoint Data	• Shear Stress vs. Shear Rate (ISO 11403-1)	
	• Viscosity vs. Shear Rate (ISO 11403-2)	

Physical Properties	Typical Value	Unit	Test Method
Specific Gravity	1.07	g/cm^3	ISO 1183
Molding Shrinkage			ISO 294-4
Across Flow	1.4	%	
Flow	1.8	%	
Water Absorpsion			ISO 62
24h, 23℃	1.1	%	
Saturation, 23℃, 2mm	6.5	%	
Equilibrium, 23℃, 2mm, 50%RH	2	%	
Sticky Number	130	cm^3/g	ISO 307

Mechanical Properties	Typical Value	Unit	Test Method
Tensile Modulus	2100	MPa	ISO 527-2
Tensile Stress (50% strain)	51	MPa	ISO 527-2
Tensile Strain (Break)	> 50	%	ISO 527-2
Tensile Creep Modulus			ISO 899-1
1 hr	820	MPa	
1000 hr	708	MPa	
Flexural Modulus	1880	MPa	ISO 178
Poisson's Ratio	0.45	MPa	ISO 527

Impact Properties	Typical Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-30℃	21	KJ/m^2	
23℃,Partial Break	102	KJ/m^2	
Charpy Unnotched Impact Strength			
23℃	No Break		ISO 179/1eU
Notched Izod Impact Strength			ISO 180/1A
-40℃	18	KJ/m^2	
-30℃	16	KJ/m^2	
23℃	92	KJ/m^2	

Electrical Properties	Typical Value	Unit	Test Method
Surface Resistivity	1.00E+12	Ohms	IEC 62631-3-2
Volume Resistivity	8.70E+10	Ohms•m	IEC 62631-3-1
Dielectric Strength	25	kV/mm	IEC 60243-1
Relative Permittivity			IEC 62631-2-1
1 MHz	3.5		
100 Hz	5.9		
Dissipation factor			IEC 62631-2-1
100 Hz	0.16		
1 MHz	0.038		
CTI	600	V	IEC 60112

Thermal Properties	Typical Value	Unit	Test Method
Deflection Temperature Under Load			
0.45MPa, Unannealed	157	℃	ISO 75-2/B
1.8MPa, Unannealed	63	℃	ISO 75-2/A
Glass Transition Temperature [1]	75	℃	ISO 11357-2
Vicat Softening Temperature	205	℃	ISO 306/B50
Melting Temperature [1]	262	℃	ISO 11357-3
Linear Thermal Expansion Coefficient			
Flow:23 to 55℃	1.40E-04	cm/cm/℃	ASTM E831
Flow	1.40E-04	cm/cm/℃	ISO 11359-2
Flow:-40 to 23℃	1.10E-04	cm/cm/℃	ISO 11359-2
Flow:55 to 160℃	1.60E-04	cm/cm/℃	ISO 11359-2
Across Flow:23 to 55℃	1.30E-04	cm/cm/℃	ASTM E831
Across Flow	1.30E-04	cm/cm/℃	ISO 11359-2
Across Flow:-40 to 23℃	1.10E-04	cm/cm/℃	ISO 11359-2
Across Flow:55 to 160℃	1.30E-04	cm/cm/℃	ISO 11359-2

Flammability	Typical Value	Unit	Test Method
Burning Rate [2](1.00mm)	< 100	mm/min	ISO 3795
Flame Rating			UL 94
0.8 mm	HB		IEC 60695-11-10,20
1.5 mm	HB		
Limiting Oxygen Index	20	%	ISO 4589-2
FMVSS Flammability	B		FMVSS 302

Filling Analysis	Typical Value	Unit	Test Method
Ejection Temperature	190	℃	

Processing Information	Typical Value	Unit
Drying Temperature	80	℃
Drying Time	2 to 4	hr
Maximum Moisture Content	0.2	%
Melt Temperature	280 to 300	℃
Melt Tempearture, Optimum	290	℃
Mold Temperature	50 to 100	℃
Mold Temperature, Optimum	80	℃
Holding Pressure	50 to 100	MPa
Drying Recommended	yes	
Holding Pressure Time	4	s/mm
Maximum Screw Tangential Speed	18	mm/min

NOTES

[1] 10℃/min

[2] FMVSS 302

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。

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