LNP™ THERMOCOMP™ Compound PF007

PF-1007
REGION EUROPE

DESCRIPTION

LNP THERMOCOMP PF007 compound is based on Nylon 6 resin containing 35% glass fiber.

GENERAL INFORMATION	
Features	High stiffness/Strength, No PFAS intentionally added
Fillers	Glass Fiber (Total fluorine >50ppm only from inorganic fluorine)
Polymer Types	Polyamide 6 (Nylon 6)
Processing Techniques	Injection Molding

INDUSTRY	SUB INDUSTRY
Building and Construction	Building Component
Consumer	Sport/Leisure, Personal Accessory, Home Appliances, Commercial Appliance
Electrical and Electronics	Mobile Phone - Computer - Tablets
Industrial	Electrical

TYPICAL PROPERTY VALUES

Revision 20231109

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Stress, break, 5 mm/min	180	MPa	ISO 527
Tensile Strain, break, 5 mm/min	3.2	%	ISO 527
Tensile Modulus, 1 mm/min	10000	MPa	ISO 527
Flexural Stress, break, 2 mm/min	280	MPa	ISO 178
Flexural Modulus, 2 mm/min	9750	MPa	ISO 178
Hardness, Rockwell L	112	-	ISO 2039-2
IMPACT [1]			
Izod Impact, notched 80*10*4 +23°C	16	kJ/m²	ISO 180/1A
Izod Impact, notched 80*10*4 -20°C	12	kJ/m²	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	11	kJ/m²	ISO 180/1A
Izod Impact, notched 80*10*4 -40°C	10	kJ/m²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	15	kJ/m²	ISO 179/1eA
Charpy -30°C, V-notch Edgew 80*10*4 sp=62mm	12	kJ/m²	ISO 179/1eA
Charpy 23°C, Unnotch Edgew 80*10*4 sp=62mm	90	kJ/m²	ISO 179/1eU
Charpy -30°C, Unnotch Edgew 80*10*4 sp=62mm	85	kJ/m²	ISO 179/1eU
THERMAL [1]			
Thermal Conductivity	0.33	W/m-°C	ISO 8302
CTE, 23°C to 60°C, flow	2.1E-05	1/°C	ISO 11359-2
CTE, 23°C to 60°C, xflow	8.1E-05	1/°C	ISO 11359-2
Ball Pressure Test, 125°C +/- 2°C	PASSES	-	IEC 60695-10-2

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Vicat Softening Temp, Rate B/50	217	°C	ISO 306
Vicat Softening Temp, Rate B/120	216	°C	ISO 306
HDT/Be, 0.45MPa Edgew 120*10*4 sp=100mm	220	°C	ISO 75/Be
HDT/Ae, 1.8 MPa Edgew 120*10*4 sp=100mm	215	°C	ISO 75/Ae
PHYSICAL (1)			
Mold Shrinkage on Tensile Bar, flow (2)	0.15 – 0.35	%	SABIC method
Density	1.42	g/cm³	ISO 1183
Water Absorption, (23°C/saturated)	6.2	%	ISO 62-1
Moisture Absorption (23°C / 50% RH)	1.6	%	ISO 62
ELECTRICAL (1)			
Volume Resistivity	>1.E+16	Ω.cm	IEC 60093
Surface Resistivity, ROA	>1.E+16	Ω	IEC 60093
Dielectric Strength, in oil, 3.2 mm	20	kV/mm	IEC 60243-1
Relative Permittivity, 1 MHz	3.4	-	IEC 60250
Dissipation Factor, 50/60 Hz	0.0061	-	IEC 60250
Dissipation Factor, 1 MHz	0.016	-	IEC 60250
Comparative Tracking Index (3)	500	V	IEC 60112
Comparative Tracking Index, M (3)	400	V	IEC 60112
Relative Permittivity, 50/60 Hz	3.6	-	IEC 60250
FLAME CHARACTERISTICS (4)			
UL Compliant, 94HB Flame Class Rating	0.75	mm	UL 94 by SABIC-IP
Glow Wire Flammability Index 650°C, passes at (3)	2	mm	IEC 60695-2-12
Oxygen Index (LOI)	27	%	ISO 4589
FMVSS Burning Speed, thickness 2 mm	10	mm/min	FMVSS 302
FMVSS Burning Speed, thickness 3 mm	5	mm/min	FMVSS 302
INJECTION MOLDING (5)			
Drying Temperature	75 – 85	°C	
Drying Time	4 – 6	Hrs	
Maximum Moisture Content	0.2	%	
Melt Temperature	250 – 280	°C	
Nozzle Temperature	240 – 270	°C	
Front - Zone 3 Temperature	250 – 280	°C	
Middle - Zone 2 Temperature	250 – 280	°C	
Rear - Zone 1 Temperature	250 – 280	°C	
Hopper Temperature	60 – 80	°C	
Mold Temperature	70 – 120	°C	

(1) The information stated on Technical Datasheets should be used as indicative only for material selection purposes and not be utilized as specification or used for part or tool design.

(2) Measurements made from laboratory test coupon. Actual shrinkage may vary outside of range due to differences in processing conditions, equipment, part geometry and tool design. It is recommended that mold shrinkage studies be performed with surrogate or legacy tooling prior to cutting tools for new molded article.

(3) Value shown here is based on internal measurement.

(4) UL Ratings shown on the technical datasheet might not cover the full range of thicknesses and colors. For details, please see the UL Yellow Card.

(5) Injection Molding parameters are only mentioned as general guidelines. These may not apply or may need adjustment in specific situations such as low shot sizes, large part molding, thin wall molding and gas-assist molding.

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