LNP™ THERMOCOMP™ Compound PF006

PF-1006
REGION AMERICAS

DESCRIPTION

LNP THERMOCOMP PF006 compound is based on Nylon 6 resin containing 30% 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 20260204

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Stress, break	129	MPa	ASTM D638
Tensile Strain, break	2.8	%	ASTM D638
Tensile Modulus, 50 mm/min	8750	MPa	ASTM D638
Flexural Stress	201	MPa	ASTM D790
Flexural Modulus	6960	MPa	ASTM D790
Tensile Stress, break	128	MPa	ISO 527
Tensile Strain, break	2.9	%	ISO 527
Tensile Modulus, 1 mm/min	8580	MPa	ISO 527
Flexural Stress	203	MPa	ISO 178
Flexural Modulus	8100	MPa	ISO 178
IMPACT [1]			
Izod Impact, unnotched, 23°C	827	J/m	ASTM D4812
Izod Impact, notched, 23°C	117	J/m	ASTM D256
Instrumented Dart Impact Energy @ peak, 23°C	9	J	ASTM D3763
Multiaxial Impact	2	J	ISO 6603
Izod Impact, unnotched 80*10*4 +23°C	55	kJ/m²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	8	kJ/m²	ISO 180/1A
THERMAL [1]			
HDT, 0.45 MPa, 3.2 mm, unannealed	219	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	206	°C	ASTM D648

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
CTE, -40°C to 40°C, flow	3.05E-05	1/°C	ASTM E831
CTE, -40°C to 40°C, xflow	6.73E-05	1/°C	ASTM E831
CTE, -40°C to 40°C, flow	3.06E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	6.72E-05	1/°C	ISO 11359-2
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	203	°C	ISO 75/Af
Relative Temp Index, Elec (2)	130	°C	UL 746B
Relative Temp Index, Mech w/impact (2)	70	°C	UL 746B
Relative Temp Index, Mech w/o impact (2)	85	°C	UL 746B
PHYSICAL (1)			
Density	1.37	g/cm³	ASTM D792
Moisture Absorption, (23°C/50% RH/24 hrs)	0.86	%	ASTM D570
Mold Shrinkage, flow, 24 hrs (3)	0.2 – 0.5	%	ASTM D955
Mold Shrinkage, xflow, 24 hrs (3)	1 – 1.2	%	ASTM D955
Mold Shrinkage, flow, 24 hrs (3)	0.17 – 0.5	%	ISO 294
Mold Shrinkage, xflow, 24 hrs (3)	1 – 1.2	%	ISO 294
Density	1.37	g/cm³	ISO 1183
Moisture Absorption (23°C / 50% RH)	1.53	%	ISO 62
ELECTRICAL (1)			
Comparative Tracking Index (UL) {PLC}	0	PLC Code	UL 746A
Hot-Wire Ignition (HWI), PLC 2	≥3	mm	UL 746A
Hot-Wire Ignition (HWI), PLC 3	≥1.5	mm	UL 746A
High Amp Arc Ignition (HAI), PLC 0	≥1.5	mm	UL 746A
High Voltage Arc Track Rate {PLC}	1	PLC Code	UL 746A
Arc Resistance, Tungsten {PLC}	5	PLC Code	ASTM D495
FLAME CHARACTERISTICS (2)			
UL Yellow Card Link	E121562-101281583	-	-
UL Recognized, 94HB Flame Class Rating	≥1.5	mm	UL 94
UV-light, water exposure/immersion	F2	-	UL 746C
INJECTION MOLDING (4)			
Drying Temperature	80	°C	
Drying Time	4	Hrs	
Maximum Moisture Content	0.15 – 0.25	%	
Melt Temperature	265 – 275	°C	
Front - Zone 3 Temperature	275 – 290	°C	
Middle - Zone 2 Temperature	265 – 275	°C	
Rear - Zone 1 Temperature	250 – 260	°C	
Mold Temperature	80 – 95	°C	
Back Pressure	0.3 – 0.7	MPa	
Screw Speed	30 – 60	rpm	

(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) 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.

(3) 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.

(4) 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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MORE INFORMATION

For curve data and CAE cards, please visit and register at https://materialfinder.sabic-specialties.com

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