LNP™ THERMOCOMP™ Compound PX18002

DESCRIPTION

LNP THERMOCOMP PX18002 compound is based on glass-filled Nylon 6 resin. Added features of this grade include: Dimensional Stability, Exceptional Processing, Good Aesthetics.

GENERAL INFORMATION	
Features	High Flow, Aesthetics/Visual effects, Dimensional stability, High stiffness/Strength, No PFAS intentionally added
Fillers	Glass Bead, 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 20260325

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Stress, break, 5 mm/min	225	MPa	ISO 527
Tensile Strain, break, 5 mm/min	3	%	ISO 527
Tensile Modulus, 1 mm/min	17600	MPa	ISO 527
Flexural Strength, 2 mm/min	350	MPa	ISO 178
Flexural Modulus, 2 mm/min	15000	MPa	ISO 178
Tensile Stress, yld, Type I, 5 mm/min	199	MPa	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	3	%	ASTM D638
Tensile Modulus, 5 mm/min	17600	MPa	ASTM D638
Flexural Strength, 1.3 mm/min, 50 mm span	290	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	12600	MPa	ASTM D790
IMPACT [1]			
Izod Impact, unnotched 80*10*3 +23°C	90	kJ/m²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	19	kJ/m²	ISO 180/1A
Charpy 23°C, Unnotch Edgew 80*10*4 sp=62mm	95	kJ/m²	ISO 179/1eU
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	18	kJ/m²	ISO 179/1eA
Izod Impact, unnotched, 23°C	1270	J/m	ASTM D4812
Izod Impact, notched, 23°C	141	J/m	ASTM D256
THERMAL [1]			
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	214	°C	ISO 75/Af
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	221	°C	ISO 75/Bf

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
HDT, 1.82 MPa, 3.2mm, unannealed	212	°C	ASTM D648
HDT, 0.45 MPa, 3.2 mm, unannealed	220	°C	ASTM D648
Vicat Softening Temp, Rate B/120	210	°C	ISO 306
Vicat Softening Temp, Rate B/50	212	°C	ISO 306
CTE, 23°C to 60°C, flow	1.7E-05	1/°C	ISO 11359-2
CTE, 23°C to 60°C, xflow	8.9E-05	1/°C	ISO 11359-2
PHYSICAL (1)			
Density	1.67	g/cm³	ISO 1183
Mold Shrinkage, flow (2)	0.28	%	SABIC method
Mold Shrinkage, xflow (2)	0.5	%	SABIC method
Moisture Absorption, (23°C/50% RH/24hrs)	0.097	%	ISO 62-4
Moisture Absorption, (23°C/50% RH/Equilibrium)	0.29	%	ISO 62-4
Melt Volume Rate			
235°C/10.0 kg	11	cm³/10 min	ISO 1133
INJECTION MOLDING (3)			
Drying Temperature	80	°C	
Drying Time	4 – 6	Hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	260 – 290	°C	
Nozzle Temperature	240 – 280	°C	
Front - Zone 3 Temperature	250 – 290	°C	
Middle - Zone 2 Temperature	250 – 290	°C	
Rear - Zone 1 Temperature	230 – 260	°C	
Hopper Temperature	60 – 80	°C	
Mold Temperature	60 – 90	°C	
Back Pressure	0.5	MPa	
Screw Speed	100	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) 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) 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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