LNP™ THERMOCOMP™ Compound LF004EX1

DESCRIPTION

LNP THERMOCOMP LF004E1 compound is based on Polyetheretherketone (PEEK) resin containing 20% glass fiber. Added features of this grade include: Easy Molding and Low Warpage

GENERAL INFORMATION	
Features	Good Processability, Low Warpage, High stiffness/Strength, High temperature resistance, No PFAS intentionally added
Fillers	Glass Fiber (Total fluorine >50ppm only from inorganic fluorine)
Polymer Types	Polyetheretherketone (PEEK)
Processing Techniques	Injection Molding

INDUSTRY	SUB INDUSTRY
Consumer	Commercial Appliance
Electrical and Electronics	Electronic Components, Mobile Phone - Computer - Tablets
Industrial	Electrical, Material Handling

TYPICAL PROPERTY VALUES

Revision 20260408

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Flexural Strength, 1.3 mm/min, 50 mm span	193	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	7300	MPa	ASTM D790
Tensile Stress, brk, Type I, 5 mm/min	140	MPa	ASTM D638
Tensile Modulus, 5 mm/min	8800	MPa	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	2.2	%	ASTM D638
Flexural Strength, 2 mm/min	200	MPa	ISO 178
Flexural Modulus, 2 mm/min	7400	MPa	ISO 178
Tensile Stress, break, 5 mm/min	135	MPa	ISO 527
Tensile Modulus, 1 mm/min	8900	MPa	ISO 527
Tensile Strain, break, 5 mm/min	2.1	%	ISO 527
IMPACT [1]			
Izod Impact, notched, 23°C	70	J/m	ASTM D256
Izod Impact, unnotched, 23°C	560	J/m	ASTM D4812
Izod Impact, notched 80*10*4 +23°C	8	kJ/m²	ISO 180/1A
Izod Impact, unnotched 80*10*4 +23°C	36	kJ/m²	ISO 180/1U
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	8.1	kJ/m²	ISO 179/1eA
Charpy 23°C, Unnotch Edgew 80*10*4 sp=62mm	42	kJ/m²	ISO 179/1eU
THERMAL [1]			
HDT, 1.82 MPa, 3.2mm, unannealed	300	°C	ASTM D648
HDT, 0.45 MPa, 3.2 mm, unannealed	330	°C	ASTM D648
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	305	°C	ISO 75/Af

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	330	°C	ISO 75/Bf
CTE			
-40°C to 120°C, flow	2.5E-05	1/°C	ASTM E831
-40°C to 120°C, xflow	5.5E-05	1/°C	ASTM E831
Relative Temp Index, Elec	130	°C	UL 746B
Relative Temp Index, Mech w/impact	130	°C	UL 746B
Relative Temp Index, Mech w/o impact	130	°C	UL 746B
PHYSICAL (1)			
Specific Gravity	1.43	-	ASTM D792
Mold Shrinkage, flow, 24 hrs (2)	0.4 – 0.6	%	ASTM D955
Mold Shrinkage, xflow, 24 hrs (2)	0.5 – 0.7	%	ASTM D955
Density	1.43	g/cm³	ASTM D792
Moisture Absorption (23°C / 50% RH)	<0.1	%	ISO 62
ELECTRICAL (1)			
Dielectric Constant			
1.1 GHz	3.48	-	SABIC method
1.9 GHz	3.5	-	SABIC method
Dissipation Factor			
1.1 GHz	0.0032	-	SABIC method
1.9 GHz	0.0034	-	SABIC method
FLAME CHARACTERISTICS			
UL Yellow Card Link	ER121562	-	-
UL Recognized, 94V-0 Flame Class Rating	≥1.5	mm	UL 94
UL Recognized, 94-5VB Flame Class Rating	≥1.5	mm	UL 94
INJECTION MOLDING (3)			
Drying Temperature	120 – 150	°C	
Drying Time	3 – 5	Hrs	
Nozzle Temperature	380 – 400	°C	
Melt Temperature	380 – 400	°C	
Front - Zone 3 Temperature	370 – 380	°C	
Middle - Zone 2 Temperature	360 – 370	°C	
Rear - Zone 1 Temperature	290 – 300	°C	
Mold Temperature	170 – 200	°C	
Screw Speed	50 – 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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