LNP™ THERMOCOMP™ Compound LF003

LF-1003

DESCRIPTION

LNP THERMOCOMP LF003 compound is based on Polyetheretherketone (PEEK) resin containing 15% glass fiber.

GENERAL INFORMATION	
Features	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 20231109

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Stress, yield	125	MPa	ISO 527
Tensile Stress, break	125	MPa	ISO 527
Tensile Strain, yield	2.3	%	ISO 527
Tensile Strain, break	2.3	%	ISO 527
Tensile Modulus, 1 mm/min	6930	MPa	ISO 527
Flexural Stress	209	MPa	ISO 178
Flexural Modulus	7000	MPa	ISO 178
Tensile Stress, yield	136	MPa	ASTM D638
Tensile Stress, break	136	MPa	ASTM D638
Tensile Strain, yield	2.9	%	ASTM D638
Tensile Strain, break	3.1	%	ASTM D638
Tensile Modulus, 5 mm/min	7446	MPa	ASTM D638
Flexural Stress	199	MPa	ASTM D790
Flexural Modulus	6274	MPa	ASTM D790
IMPACT [1]			
Izod Impact, notched 80*10*4 +23°C	6	kJ/m²	ISO 180/1A
Izod Impact, unnotched 80*10*4 +23°C	54	kJ/m²	ISO 180/1U
Multiaxial Impact	3	J	ISO 6603
Izod Impact, notched, 23°C	53	J/m	ASTM D256
Izod Impact, unnotched, 23°C	854	J/m	ASTM D4812
Instrumented Dart Impact Energy @ peak, 23°C	14	J	ASTM D3763
THERMAL [1]			

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	325	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	244	°C	ISO 75/Af
CTE, -40°C to 40°C, flow	3.10E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	4.80E-05	1/°C	ISO 11359-2
HDT, 0.45 MPa, 3.2 mm, unannealed	328	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	258	°C	ASTM D648
CTE, -40°C to 40°C, flow	3.06E-05	1/°C	ASTM E831
CTE, -40°C to 40°C, xflow	4.86E-05	1/°C	ASTM E831
PHYSICAL (1)			
Density	1.39	g/cm³	ISO 1183
Mold Shrinkage, flow, 24 hrs (2)	0.79	%	ISO 294
Mold Shrinkage, xflow, 24 hrs (2)	1	%	ISO 294
Density	1.39	g/cm³	ASTM D792
Mold Shrinkage, flow, 24 hrs (2)	0.8	%	ASTM D955
Mold Shrinkage, xflow, 24 hrs (2)	1	%	ASTM D955
INJECTION MOLDING (3)			
Drying Temperature	150	°C	
Drying Time	4 – 6	Hrs	
Front - Zone 3 Temperature	380 – 400	°C	
Middle - Zone 2 Temperature	380 – 400	°C	
Rear - Zone 1 Temperature	370 – 380	°C	
Mold Temperature	175 – 190	°C	
Back Pressure	0.3 – 0.7	MPa	
Screw Speed	60 – 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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