LNP™ THERMOCOMP™ COMPOUND LF006EX1

DESCRIPTION

LNP THERMOCOMP LF006EX1 compound is based on Polyetheretherketone (PEEK) resin containing 30% glass fiber. Added features of this grade include: Low warpage, Easy Molding.

GENERAL INFORMATION	
Features	Good Processability, Low Warpage, High stiffness/Strength, High temperature resistance, No PFAS intentionally added
Fillers	Glass Fiber
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 20241022

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Stress, brk, Type I, 5 mm/min	170	MPa	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	2.3	%	ASTM D638
Tensile Modulus, 5 mm/min	12300	MPa	ASTM D638
Flexural Strength, 1.3 mm/min, 50 mm span	235	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	10100	MPa	ASTM D790
Tensile Stress, break, 5 mm/min	170	MPa	ISO 527
Tensile Strain, break, 5 mm/min	2.2	%	ISO 527
Tensile Modulus, 1 mm/min	11800	MPa	ISO 527
Flexural Strength, 2 mm/min	225	MPa	ISO 178
Flexural Modulus, 2 mm/min	10200	MPa	ISO 178
IMPACT [1]			
Izod Impact, unnotched, 23°C	732	J/m	ASTM D4812
Izod Impact, notched, 23°C	95	J/m	ASTM D256
Izod Impact, unnotched 80*10*4 +23°C	47	kJ/m²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	10	kJ/m²	ISO 180/1A
Charpy 23°C, Unnotch Edgew 80*10*3 sp=62mm	46	kJ/m²	ISO 179/1eU
Charpy 23°C, V-notch Edgew 80*10*3 sp=62mm	10	kJ/m²	ISO 179/1eA
THERMAL [1]			
HDT, 0.45 MPa, 3.2 mm, unannealed	336	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	321	°C	ASTM D648
CTE, -40°C to 120°C, flow	2.23E-5	1/°C	ASTM E831

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
CTE, -40°C to 120°C, xflow	4.10E-05	1/°C	ASTM E831
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	333	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	309	°C	ISO 75/Af
PHYSICAL [1]			
Moisture Absorption, (23°C/50% RH/24 hrs)	0.037	%	ASTM D570
Specific Gravity	1.536	-	ASTM D792
Mold Shrinkage, flow [2]	0.43	%	SABIC method
Mold Shrinkage, xflow [2]	0.65	%	SABIC method
Moisture Absorption, (23°C/50% RH/Equilibrium)	0.088	%	ISO 62-4
Density	1.532	g/cm³	ASTM D792
ELECTRICAL [1]			
Dielectric Constant, 1.1 GHz	3.82	-	SABIC method
Dielectric Constant, 1.9 GHz	3.84	-	SABIC method
Dissipation Factor, 1.1 GHz	0.0039	-	SABIC method
Dissipation Factor, 1.9 GHz	0.0041	-	SABIC method
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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