LNP™ THERMOCOMP™ Compound EF004

EF-1004

DESCRIPTION

LNP THERMOCOMP EF004 compound is based on Polyetherimide (PEI) resin containing 20% 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	Polyetherimide (PEI)
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 20240515

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Stress, break	150	MPa	ASTM D638
Tensile Strain, break	3.4	%	ASTM D638
Tensile Modulus, 50 mm/min	7180	MPa	ASTM D638
Flexural Stress	240	MPa	ASTM D790
Flexural Modulus	7570	MPa	ASTM D790
Tensile Stress, break	155	MPa	ISO 527
Tensile Strain, break	2.9 – 4	%	ISO 527
Tensile Modulus, 1 mm/min	6800	MPa	ISO 527
Flexural Stress	226	MPa	ISO 178
Flexural Modulus	6800	MPa	ISO 178
IMPACT [1]			
Izod Impact, unnotched, 23°C	694	J/m	ASTM D4812
Izod Impact, notched, 23°C	74	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
THERMAL [1]			
HDT, 1.82 MPa, 3.2mm, unannealed	207	°C	ASTM D648
CTE, -40°C to 40°C, flow	2.5E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	6.E-05	1/°C	ISO 11359-2
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	205	°C	ISO 75/Af
Relative Temp Index, Elec [2]	105	°C	UL 746B

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Relative Temp Index, Mech w/impact [2]	105	°C	UL 746B
Relative Temp Index, Mech w/o impact [2]	105	°C	UL 746B
PHYSICAL [1]			
Density	1.43	g/cm³	ASTM D792
Moisture Absorption, (23°C/50% RH/24 hrs)	0.19	%	ASTM D570
Mold Shrinkage, flow, 24 hrs [3]	0.3 – 0.5	%	ASTM D955
Mold Shrinkage, xflow, 24 hrs [3]	0.6 – 0.8	%	ASTM D955
Mold Shrinkage, flow, 24 hrs [3]	0.3 – 0.5	%	ISO 294
Mold Shrinkage, xflow, 24 hrs [3]	0.6 – 0.8	%	ISO 294
Wear Factor Washer	140	10^-10 in^5-min/ft-lb-hr	ASTM D3702 Modified: Manual
Dynamic COF	0.52	-	ASTM D3702 Modified: Manual
Static COF	0.48	-	ASTM D3702 Modified: Manual
Density	1.43	g/cm³	ISO 1183
FLAME CHARACTERISTICS [2]			
UL Yellow Card Link	E121562-101357467	-	-
UL Recognized, 94V-0 Flame Class Rating	≥0.75	mm	UL 94
INJECTION MOLDING [4]			
Extended Drying Temperature	150	°C	
Drying Time	4 – 6	Hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	360 – 400	°C	
Rear - Zone 1 Temperature	345 – 400	°C	
Middle - Zone 2 Temperature	355 – 400	°C	
Front - Zone 3 Temperature	365 – 400	°C	
Nozzle Temperature	360 – 400	°C	
Mold Temperature	130 – 180	°C	
Back Pressure	0.3 – 0.7	MPa	
Screw speed (Circumferential speed)	0.2 – 0.3	m/s	
Vent Depth	0.025 – 0.076	mm	

(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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