

# LNPT<sup>TM</sup> THERMOCOMP<sup>TM</sup> COMPOUND EC004XXC

EC-1004

## DESCRIPTION

LNP THERMOCOMP EC004XXC compound is based on Polyetherimide (PEI) resin containing 20% carbon fiber. Added features of this grade include: Electrically Conductive.

GENERAL INFORMATION	
Features	Electrically Conductive, Carbon fiber filled, High stiffness/Strength, High temperature resistance, No PFAS intentionally added
Fillers	Carbon Fiber
Polymer Types	Polyetherimide (PEI)
Processing Techniques	Injection Molding

INDUSTRY	SUB INDUSTRY
Automotive	Aerospace
Building and Construction	Building Component
Consumer	Sport/Leisure, Personal Accessory, Home Appliances, Commercial Appliance
Electrical and Electronics	Mobile Phone - Computer - Tablets
Industrial	Electrical, Defense

## TYPICAL PROPERTY VALUES

Revision 20231109

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
<b>MECHANICAL <sup>(1)</sup></b>			
Tensile Stress, break	170	MPa	ASTM D638
Tensile Strain, break	2	%	ASTM D638
Flexural Stress	259	MPa	ASTM D790
Flexural Modulus	12330	MPa	ASTM D790
Tensile Stress, break	175	MPa	ISO 527
Tensile Strain, break	2	%	ISO 527
Tensile Modulus, 1 mm/min	14500	MPa	ISO 527
Flexural Stress	250	MPa	ISO 178
Flexural Modulus	12000	MPa	ISO 178
<b>IMPACT <sup>(1)</sup></b>			
Izod Impact, unnotched, 23°C	534	J/m	ASTM D4812
Izod Impact, notched, 23°C	53	J/m	ASTM D256
Izod Impact, unnotched 80*10*4 +23°C	30	kJ/m <sup>2</sup>	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	7	kJ/m <sup>2</sup>	ISO 180/1A
<b>THERMAL <sup>(1)</sup></b>			
HDT, 1.82 MPa, 3.2mm, unannealed	212	°C	ASTM D648
CTE, -40°C to 40°C, flow	1.E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	6.E-05	1/°C	ISO 11359-2

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	210	°C	ISO 75/Af
<b>PHYSICAL <sup>(1)</sup></b>			
Density	1.34	g/cm <sup>3</sup>	ASTM D792
Mold Shrinkage, flow, 24 hrs <sup>(2)</sup>	0.1 – 0.3	%	ASTM D955
Mold Shrinkage, xflow, 24 hrs <sup>(2)</sup>	0.3 – 0.5	%	ASTM D955
Mold Shrinkage, flow, 24 hrs <sup>(2)</sup>	0.1 – 0.3	%	ISO 294
Mold Shrinkage, xflow, 24 hrs <sup>(2)</sup>	0.3 – 0.5	%	ISO 294
Density	1.34	g/cm <sup>3</sup>	ISO 1183
Moisture Absorption (23°C / 50% RH)	0.2	%	ISO 62
<b>ELECTRICAL <sup>(1)</sup></b>			
Surface Resistivity	1.E+02 – 1.E+06	Ω	ASTM D257
<b>FLAME CHARACTERISTICS <sup>(1)</sup></b>			
UL Compliant, 94V-0 Flame Class Rating <sup>(3)</sup>	0.5	mm	UL 94 by SABIC-IP
<b>INJECTION MOLDING <sup>(4)</sup></b>			
Drying Temperature	150	°C	
Drying Time	4 – 6	Hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	360 – 400	°C	
Rear - Zone 1 Temperature	360 – 380	°C	
Middle - Zone 2 Temperature	370 – 390	°C	
Front - Zone 3 Temperature	380 – 400	°C	
Nozzle Temperature	390 – 400	°C	
Mold Temperature	140 – 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) 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) UL rating shown here is based on internal measurements.

(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.

## ADDITIONAL PRODUCT NOTES

No PFAS intentionally added: The grade listed in this document does not contain PFAS intentionally added during Seller's manufacturing process and is not expected to contain unintentional PFAS impurities. Each user is responsible for evaluating the presence of unintentional PFAS impurities.

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