

# LNPT<sup>TM</sup> THERMOCOMP<sup>TM</sup> COMPOUND EC004APQ

EC004APQ

## DESCRIPTION

LNP THERMOCOMP EC004APQ compound is based on Polyetherimide (PEI) resin containing 20% carbon fiber. Added features of this grade include: Electrically Conductive, FAR25.853 Compliant.

GENERAL INFORMATION	
Features	Flame Retardant, 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

## TYPICAL PROPERTY VALUES

Revision 20230607

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
<b>MECHANICAL <sup>(1)</sup></b>			
Shear Modulus	4399	MPa	ASTM D732
Shear Strength	121.35	MPa	ASTM D732
Tensile Stress, brk, Type I, 5 mm/min	245	MPa	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	2.3	%	ASTM D638
Tensile Modulus, 5 mm/min	19140	MPa	ASTM D638
Flexural Stress, brk, 1.3 mm/min, 50 mm span	344	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	15800	MPa	ASTM D790
<b>IMPACT <sup>(1)</sup></b>			
Izod Impact, unnotched, 23°C	711	J/m	ASTM D4812
Izod Impact, notched, 23°C	109	J/m	ASTM D256
<b>THERMAL <sup>(1)</sup></b>			
CTE, -40°C to 40°C, flow	5.4E-6	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	5.5E-5	1/°C	ISO 11359-2
HDT, 1.82 MPa, 3.2mm, unannealed	170	°C	ASTM D648
<b>PHYSICAL <sup>(1)</sup></b>			
Mold Shrinkage, xflow, 24 hrs <sup>(2)</sup>	0.4 – 0.7	%	ASTM D955
Mold Shrinkage, flow, 24 hrs <sup>(2)</sup>	0.2 – 0.4	%	ASTM D955
Specific Gravity	1.33	-	ASTM D792

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Moisture Absorption, (23°C/50% RH/24 hrs)	0.15	%	ASTM D570
Poisson's Ratio	0.44	-	ASTM E132
<b>ELECTRICAL <sup>(1)</sup></b>			
Surface Resistivity	1.E+05 – 1.E+06	Ω	ASTM D257
<b>INJECTION MOLDING <sup>(3)</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) 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.

## MORE INFORMATION

For curve data and CAE cards, please visit and register at <https://materialfinder.sabic-specialties.com>

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