

# LNPTM THERMOCOMPTM COMPOUND EF004XXP

## **DESCRIPTION**

LNP THERMOCOMP EF004XXP compound is based on Polyetherimide (PEI) resin containing 20% glass fiber. Added features of this grade include: High Modulus, High Strength, Good Dimension Stability and Good Warpage Control.

GENERAL INFORMATION	
Features	Low Warpage, Dimensional stability, High stiffness/Strength, High temperature resistance, No PFAS intentionally added
Fillers	Glass Fiber
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 20230607

MECHANICAL         MECHANICAL         MPa         ASTM D638           Tensile Strain, brk, Type I, 5 mm/min         3.5         %         ASTM D638           Tensile Modulus, 5 mm/min         7040         MPa         ASTM D638           Flexural Stress, yld, 1.3 mm/min, 50 mm span         240         MPa         ASTM D790           Flexural Modulus, 1.3 mm/min, 50 mm span         7030         MPa         ASTM D790           IMPACT (1)         Lizod Impact, notched, 23°C         60         J/m         ASTM D256           THERMAL (1)           HDT, 1.82 MPa, 3.2mm, unannealed         210         °C         ASTM D648           Relative Temp Index, Elec (2)         105         °C         UL 746B           Relative Temp Index, Mech w/o impact (2)         105         °C         UL 746B           PHYSICAL (1)         ACT ASTM D648	PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Tensile Strain, brk, Type I, 5 mm/min 3.5 % ASTM D638  Tensile Modulus, 5 mm/min 7040 MPa ASTM D638  Flexural Stress, yld, 1.3 mm/min, 50 mm span 240 MPa ASTM D790  Flexural Modulus, 1.3 mm/min, 50 mm span 7030 MPa ASTM D790  IMPACT (1)  Izod Impact, notched, 23°C 60 J/m ASTM D256  THERMAL (1)  HDT, 1.82 MPa, 3.2mm, unannealed 210 °C ASTM D648  Relative Temp Index, Elec (2) 105 °C UL 746B  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)	MECHANICAL (1)			
Tensile Modulus, 5 mm/min         7040         MPa         ASTM D638           Flexural Stress, yld, 1.3 mm/min, 50 mm span         240         MPa         ASTM D790           Flexural Modulus, 1.3 mm/min, 50 mm span         7030         MPa         ASTM D790           IMPACT (1)         IMPACT (1)           Izod Impact, notched, 23°C         60         J/m         ASTM D256           THERMAL (1)         HDT, 1.82 MPa, 3.2mm, unannealed         210         °C         ASTM D648           Relative Temp Index, Elec (2)         105         °C         UL 746B           Relative Temp Index, Mech w/o impact (2)         105         °C         UL 746B           Relative Temp Index, Mech w/o impact (2)         105         °C         UL 746B           PHYSICAL (1)         PHYSICAL (1)	Tensile Stress, yld, Type I, 5 mm/min	150	MPa	ASTM D638
Flexural Stress, yld, 1.3 mm/min, 50 mm span         240         MPa         ASTM D790           Flexural Modulus, 1.3 mm/min, 50 mm span         7030         MPa         ASTM D790           IMPACT (1)         Izod Impact, notched, 23°C         60         J/m         ASTM D256           THERMAL (1)           HDT, 1.82 MPa, 3.2mm, unannealed         210         °C         ASTM D648           Relative Temp Index, Elec (2)         105         °C         UL 746B           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)	Tensile Strain, brk, Type I, 5 mm/min	3.5	%	ASTM D638
Flexural Modulus, 1.3 mm/min, 50 mm span   7030   MPa   ASTM D790     IMPACT (1)	Tensile Modulus, 5 mm/min	7040	MPa	ASTM D638
IMPACT (1)   Izod Impact, notched, 23°C   60   J/m   ASTM D256     THERMAL (1)	Flexural Stress, yld, 1.3 mm/min, 50 mm span	240	MPa	ASTM D790
Izod Impact, notched, 23°C         60         J/m         ASTM D256           THERMAL (1)           HDT, 1.82 MPa, 3.2mm, unannealed         210         °C         ASTM D648           Relative Temp Index, Elec (2)         105         °C         UL 746B           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)	Flexural Modulus, 1.3 mm/min, 50 mm span	7030	MPa	ASTM D790
### THERMAL (1)  ### HDT, 1.82 MPa, 3.2mm, unannealed 210 °C ASTM D648  Relative Temp Index, Elec (2) 105 °C UL 7468  Relative Temp Index, Mech w/impact (2) 105 °C UL 7468  Relative Temp Index, Mech w/o impact (2) 105 °C UL 7468  PHYSICAL (1)	IMPACT (1)			
HDT, 1.82 MPa, 3.2mm, unannealed 210 °C ASTM D648  Relative Temp Index, Elec (2) 105 °C UL 746B  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)	Izod Impact, notched, 23°C	60	J/m	ASTM D256
Relative Temp Index, Elec <sup>(2)</sup> 105 °C UL 746B  Relative Temp Index, Mech w/impact <sup>(2)</sup> 105 °C UL 746B  Relative Temp Index, Mech w/o impact <sup>(2)</sup> 105 °C UL 746B  PHYSICAL <sup>(1)</sup>	THERMAL (1)			
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)	HDT, 1.82 MPa, 3.2mm, unannealed	210	°C	ASTM D648
Relative Temp Index, Mech w/o impact <sup>(2)</sup> 105  °C  UL 746B  PHYSICAL <sup>(1)</sup>	Relative Temp Index, Elec <sup>(2)</sup>	105	°C	UL 746B
PHYSICAL (1)	Relative Temp Index, Mech w/impact (2)	105	°C	UL 746B
	Relative Temp Index, Mech w/o impact (2)	105	°C	UL 746B
1.42	PHYSICAL (1)			
Density 1.42 g/cm <sup>3</sup> ASIM D792	Density	1.42	g/cm³	ASTM D792
Melt Flow Rate, 337°C/6.7 kgf         9.5         g/10 min         ASTM D1238	Melt Flow Rate, 337°C/6.7 kgf	9.5	g/10 min	ASTM D1238
FLAME CHARACTERISTICS (2)	FLAME CHARACTERISTICS (2)			
UL Yellow Card Link         E207780-103690242         -         -         -	UL Yellow Card Link	E207780-103690242	-	
UL Recognized, 94V-0 Flame Class Rating ≥0.75 mm UL 94	UL Recognized, 94V-0 Flame Class Rating	≥0.75	mm	UL 94
UL Recognized, 94V-2 Flame Class Rating ≥0.4 mm UL 94	UL Recognized, 94V-2 Flame Class Rating	≥0.4	mm	UL 94
INJECTION MOLDING (3)	INJECTION MOLDING (3)			



PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Drying Temperature	150	°C	
Drying Time	4 – 6	Hrs	
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) 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) 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.

#### **MORE INFORMATION**

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

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