

# LNPTM STAT-KONTM COMPOUND ZE004

ZC-1004

## DESCRIPTION

LNP STAT-KON ZE004 compound is based on Polyphenylene Ether / Polystyrene (PPE/PS) blend containing 20% carbon fiber. Added features of this grade include: Electrically Conductive.

GENERAL INFORMATION	
Features	Electrically Conductive, Carbon fiber filled, High stiffness/Strength, No PFAS intentionally added
Fillers	Carbon Fiber
Polymer Types	Polyphenylene Ether + PS (PPE+PS)
Processing Techniques	Injection Molding

  

INDUSTRY	SUB INDUSTRY
Electrical and Electronics	Electronic Components
Industrial	Material Handling

## TYPICAL PROPERTY VALUES

Revision 20231109

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
<b>MECHANICAL <sup>(1)</sup></b>			
Tensile Stress, brk, Type I, 5 mm/min	100	MPa	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	1	%	ASTM D638
Tensile Modulus, 5 mm/min	16300	MPa	ASTM D638
Flexural Strength, 1.3 mm/min, 50 mm span	130	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	12500	MPa	ASTM D790
Tensile Stress, break, 5 mm/min	90	MPa	ISO 527
Tensile Strain, break, 5 mm/min	0.9	%	ISO 527
Tensile Modulus, 1 mm/min	16000	MPa	ISO 527
Flexural Strength, 2 mm/min	125	MPa	ISO 178
Flexural Modulus, 2 mm/min	12000	MPa	ISO 178
<b>IMPACT <sup>(1)</sup></b>			
Izod Impact, unnotched, 23°C	200	J/m	ASTM D4812
Izod Impact, notched, 23°C	45	J/m	ASTM D256
Izod Impact, unnotched 80*10*4 +23°C	12	kJ/m <sup>2</sup>	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	5	kJ/m <sup>2</sup>	ISO 180/1A
<b>THERMAL <sup>(1)</sup></b>			
HDT, 0.45 MPa, 3.2 mm, unannealed	139	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	135	°C	ASTM D648
CTE, -40°C to 40°C, flow	8.9E-06	1/°C	ASTM E831
CTE, -40°C to 40°C, xflow	6.5E-05	1/°C	ASTM E831
CTE, -40°C to 40°C, flow	8.9E-06	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	6.5E-05	1/°C	ISO 11359-2

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	141	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	135	°C	ISO 75/Af
<b>PHYSICAL <sup>(1)</sup></b>			
Density	1.15	g/cm <sup>3</sup>	ASTM D792
Moisture Absorption, (23°C/50% RH/24 hrs)	0.02	%	ASTM D570
Water Absorption, (23°C/24hrs)	0.1	%	ASTM D570
Mold Shrinkage, flow <sup>(2)</sup>	0.1 – 0.2	%	SABIC method
Mold Shrinkage, xflow <sup>(2)</sup>	0.2 – 0.4	%	SABIC method
Density	1.15	g/cm <sup>3</sup>	ISO 1183
<b>ELECTRICAL <sup>(1)</sup></b>			
Surface Resistivity <sup>(3)</sup>	1.E+02 – 1.E+06	Ω	ASTM D257
<b>FLAME CHARACTERISTICS <sup>(4)</sup></b>			
UL Yellow Card Link	<a href="#">E121562-101283904</a>	-	-
UL Yellow Card Link 2	<a href="#">E207780-103093725</a>	-	-
UL Recognized, 94HB Flame Class Rating	1.5	mm	UL 94
<b>INJECTION MOLDING <sup>(5)</sup></b>			
Drying Temperature	120	°C	
Drying Time	4	Hrs	
Melt Temperature	300 – 305	°C	
Front - Zone 3 Temperature	300 – 310	°C	
Middle - Zone 2 Temperature	290 – 300	°C	
Rear - Zone 1 Temperature	275 – 290	°C	
Mold Temperature	80 – 110	°C	
Back Pressure	0.2 – 0.3	MPa	
Screw Speed	30 – 60	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) Measurement meets requirements as specified in ASTM D4496.

(4) UL rating shown on the technical datasheet might not cover the full range of thicknesses and colors. For details, please see the UL Yellow Card.

(5) 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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