

LNPTM THERMOCOMPTM COMPOUND ZKC06

DESCRIPTION

LNP THERMOCOMP ZKC06 compound is based on Polyphenylene Ether / Polystyrene (PPE/PS) blend containing 30% minerals and impact modifier. Added features of this grade include: High Dielectric Constant (Dk), Extremely Low Dissipation Factor (Df), Good Ductility and Good Thermal Performance.

GENERAL INFORMATION	
Features	Dielectrics, Impact resistant, No PFAS intentionally added
Fillers	Mineral
Polymer Types	Polyphenylene Ether + PS (PPE+PS)
Processing Techniques	Injection Molding

INDUSTRY	SUB INDUSTRY
Automotive	Automotive Interiors
Consumer	Personal Accessory
Electrical and Electronics	Mobile Phone - Computer - Tablets
Industrial	Electrical

TYPICAL PROPERTY VALUES

PROPERTIES TYPICAL VALUES UNITS **TEST METHODS** MECHANICAL⁽¹⁾ Tensile Stress, yld, Type I, 50 mm/min 55 MPa ASTM D638 Tensile Stress, brk, Type I, 50 mm/min 46 MPa ASTM D638 Tensile Strain, yld, Type I, 50 mm/min 8.7 % ASTM D638 14 % Tensile Strain, brk, Type I, 50 mm/min ASTM D638 Tensile Modulus, 50 mm/min 2530 MPa ASTM D638 Flexural Stress, yld, 1.3 mm/min, 50 mm span ASTM D790 85 MPa Flexural Stress, brk, 1.3 mm/min, 50 mm span 83 MPa ASTM D790 Flexural Modulus, 1.3 mm/min, 50 mm span 2350 MPa ASTM D790 Tensile Stress, yield, 50 mm/min 56 MPa ISO 527 Tensile Stress, break, 50 mm/min 49 MPa ISO 527 Tensile Strain, yield, 50 mm/min 7.9 % ISO 527 Tensile Strain, break, 50 mm/min 16 % ISO 527 Tensile Modulus, 1 mm/min 2490 ISO 527 MPa Flexural Stress, yield, 2 mm/min 95 MPa ISO 178 93 Flexural Stress, break, 2 mm/min MPa ISO 178 2620 ISO 178 Flexural Modulus, 2 mm/min MPa IMPACT (1) Izod Impact, notched, 23°C 280 J/m ASTM D256 Izod Impact, notched, -20°C 145 ASTM D256 J/m Izod Impact, notched 80*10*4 +23°C 30 kJ/m² ISO 180/1A Izod Impact, notched 80*10*4 -20°C 13 kJ/m² ISO 180/1A

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CHEMISTRY THAT MATTERS

Revision 20241021



PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
THERMAL ⁽¹⁾			
HDT, 0.45 MPa, 3.2 mm, unannealed	173	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	154	°C	ASTM D648
CTE, -40°C to 150°C, flow	6.1E-05	1/°C	ASTM E831
CTE, -40°C to 150°C, xflow	8.7E-05	1/°C	ASTM E831
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	173	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	155	°C	ISO 75/Af
Relative Temp Index, Elec ⁽²⁾	65	°C	UL 746B
Relative Temp Index, Mech w/impact ⁽²⁾	65	°C	UL 746B
Relative Temp Index, Mech w/o impact ⁽²⁾	65	°C	UL 746B
PHYSICAL ⁽¹⁾			
Density	1.35	g/cm³	ASTM D792
Mold Shrinkage, flow, 24 hrs ⁽³⁾	0.6 – 0.8	%	ISO 294
Mold Shrinkage, xflow, 24 hrs ⁽³⁾	0.6 – 0.8	%	ISO 294
Melt Flow Rate, 300°C/5.0 kgf	11	g/10 min	ASTM D1238
Melt Flow Rate, 300°C/10 kgf	36	g/10 min	ASTM D1238
Density	1.35	g/cm ³	ISO 1183
Water Absorption, (23°C/24hrs)	0.03	%	ISO 62-1
Melt Volume Rate, MVR at 300°C/5.0 kg	9	cm³/10 min	ISO 1133
Melt Volume Rate, MVR at 300°C/10.0 kg	30	cm³/10 min	ISO 1133
ELECTRICAL ⁽¹⁾			
Dielectric Constant, 1.1 GHz	3.7	-	SABIC method
Dielectric Constant, 1.9 GHz	3.7		SABIC method
Dielectric Constant, 5 GHz	3.7	-	SABIC method
Dielectric Constant, 10 GHz	3.7	-	SABIC method
Dissipation Factor, 1.1 GHz	0.0009	-	SABIC method
Dissipation Factor, 1.9 GHz	0.0011	-	SABIC method
Dissipation Factor, 5 GHz	0.0019	-	SABIC method
Dissipation Factor, 10 GHz	0.0022	-	SABIC method
FLAME CHARACTERISTICS (2)			
UL Yellow Card Link	E207780-102719345		
UL Recognized, 94HB Flame Class Rating	1	mm	UL 94
INJECTION MOLDING (4)			
Drying Temperature	105	°C	
Drying Time	3 – 5	Hrs	
Melt Temperature	295 – 305	°C	
Nozzle Temperature	290 – 295	°C	
Front - Zone 3 Temperature	300 – 305	°C	
Middle - Zone 2 Temperature	290 – 295	°C	
Rear - Zone 1 Temperature	280 – 285	°C	
Mold Temperature	90	°C	
Back Pressure	9	MPa	
Screw Speed	100	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) 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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