

# LNPT<sup>TM</sup> THERMOCOMP<sup>TM</sup> COMPOUND FX10009

FX10009

## DESCRIPTION

LNP THERMOCOMP FX10009 compound is based on Polyethylene (PE) resin containing proprietary fillers. Added features of this grade include: Improved Dielectric Properties.

GENERAL INFORMATION	
Features	Dielectrics
Fillers	Unreinforced
Polymer Types	Polyethylene, Unspecified (PE, Unspecified)
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

Revision 20231109

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
<b>MECHANICAL <sup>(1)</sup></b>			
Tensile Stress, break, 5 mm/min	20	MPa	ISO 527
Tensile Strain, break, 5 mm/min	1.2	%	ISO 527
Tensile Modulus, 1 mm/min	2550	MPa	ISO 527
Flexural Stress, break, 2 mm/min	15	MPa	ISO 178
Flexural Modulus, 2 mm/min	2750	MPa	ISO 178
<b>IMPACT <sup>(1)</sup></b>			
Izod Impact, unnotched 80*10*4 +23°C	5.5	kJ/m <sup>2</sup>	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	3.5	kJ/m <sup>2</sup>	ISO 180/1A
<b>THERMAL <sup>(1)</sup></b>			
CTE, 23°C to 60°C, flow	1.30E-04	1/°C	ISO 11359-2
CTE, 23°C to 60°C, xflow	1.50E-04	1/°C	ISO 11359-2
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	100	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	60	°C	ISO 75/Af
<b>PHYSICAL <sup>(1)</sup></b>			
Melt Volume Rate, MVR at 190°C/10.0 kg	7.5	cm <sup>3</sup> /10 min	ISO 1133
Melt Volume Rate, MVR at 220°C/10.0 kg	12.5	cm <sup>3</sup> /10 min	ISO 1133
Mold Shrinkage, flow <sup>(2)</sup>	1.5 – 2.0	%	SABIC method
Density	2.50	g/cm <sup>3</sup>	ISO 1183
Water Absorption, (23°C/24hrs)	0.08	%	ISO 62-1
<b>ELECTRICAL <sup>(1)</sup></b>			

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Dissipation Factor, 1 GHz	0.008	-	IEC 60250
Dissipation Factor, 500 MHz	0.008	-	IEC 60250
Dissipation Factor, 100 MHz	0.009	-	IEC 60250
Relative Permittivity, 1 GHz	13.1	-	IEC 60250
Relative Permittivity, 500 MHz	13.4	-	IEC 60250
Relative Permittivity, 100 MHz	13.6	-	IEC 60250
<b>INJECTION MOLDING <sup>(3)</sup></b>			
Drying Temperature	80	°C	
Drying Time	4	Hrs	
Maximum Moisture Content	0.03	%	
Melt Temperature	210 – 215	°C	
Front - Zone 3 Temperature	205 – 215	°C	
Middle - Zone 2 Temperature	200 – 210	°C	
Rear - Zone 1 Temperature	190 – 200	°C	
Mold Temperature	15 – 55	°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) 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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