

# LNPT<sup>TM</sup> THERMOCOMP<sup>TM</sup> COMPOUND 2F004

FP-EF-1004

## DESCRIPTION

LNP THERMOCOMP 2F004 compound is based on Ethylene Tetrafluoroethylene (ETFE) resin containing 20% glass fiber.

GENERAL INFORMATION	
Features	High stiffness/Strength
Fillers	Glass Fiber
Polymer Types	Ethylene Tetrafluoroethylene Copolymer (ETFE)
Processing Techniques	Injection Molding
INDUSTRY	SUB INDUSTRY
Electrical and Electronics	Energy Management, Electronic Components
Industrial	Material Handling

## TYPICAL PROPERTY VALUES

Revision 20231109

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
<b>MECHANICAL <sup>(1)</sup></b>			
Tensile Stress, yld, Type I, 5 mm/min	54	MPa	ASTM D638
Tensile Stress, brk, Type I, 5 mm/min	49	MPa	ASTM D638
Tensile Strain, yld, Type I, 5 mm/min	9.4	%	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	10.7	%	ASTM D638
Tensile Modulus, 5 mm/min	4860	MPa	ASTM D638
Flexural Modulus, 1.3 mm/min, 50 mm span	4020	MPa	ASTM D790
Tensile Stress, yield, 5 mm/min	52	MPa	ISO 527
Tensile Stress, break, 5 mm/min	51	MPa	ISO 527
Tensile Strain, yield, 5 mm/min	9.1	%	ISO 527
Tensile Strain, break, 5 mm/min	9.8	%	ISO 527
Tensile Modulus, 1 mm/min	4400	MPa	ISO 527
Flexural Stress	72	MPa	ISO 178
Flexural Modulus, 2 mm/min	3780	MPa	ISO 178
<b>IMPACT <sup>(1)</sup></b>			
Izod Impact, unnotched, 23°C	1460	J/m	ASTM D4812
Izod Impact, notched, 23°C	551	J/m	ASTM D256
Multiaxial Impact	10	J	ISO 6603
Instrumented Dart Impact Total Energy, 23°C	21	J	ASTM D3763
Izod Impact, unnotched 80°10°4 +23°C	96	kJ/m <sup>2</sup>	ISO 180/1U
Izod Impact, notched 80°10°4 +23°C	45	kJ/m <sup>2</sup>	ISO 180/1A
<b>THERMAL <sup>(1)</sup></b>			
HDT, 0.45 MPa, 3.2 mm, unannealed	240	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	132	°C	ASTM D648

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
CTE, -30°C to 30°C, flow	5.9E-05	1/°C	ASTM D696
CTE, -30°C to 30°C, xflow	7.6E-05	1/°C	ASTM D696
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	219	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	112	°C	ISO 75/Af
<b>PHYSICAL <sup>(1)</sup></b>			
Specific Gravity	1.85	-	ASTM D792
Density	1.84	g/cm <sup>3</sup>	ASTM D792
Moisture Absorption, (23°C/50% RH/24 hrs)	0.02	%	ASTM D570
Mold Shrinkage, flow, 24 hrs <sup>(2)</sup>	1 – 3	%	ASTM D955
Mold Shrinkage, xflow, 24 hrs <sup>(2)</sup>	2 – 4	%	ASTM D955
Moisture Absorption (23°C / 50% RH)	0.01	%	ISO 62
<b>INJECTION MOLDING <sup>(3)</sup></b>			
Drying Temperature	120 – 150	°C	
Drying Time	4	Hrs	
Melt Temperature	315	°C	
Front - Zone 3 Temperature	325 – 340	°C	
Middle - Zone 2 Temperature	300 – 325	°C	
Rear - Zone 1 Temperature	280 – 300	°C	
Mold Temperature	90 – 120	°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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