

# LNPT<sup>TM</sup> THERMOCOMP<sup>TM</sup> COMPOUND 2F005

FP-EF-1005

## DESCRIPTION

LNP THERMOCOMP 2F005 compound is based on Ethylene Tetrafluoroethylene (ETFE) resin containing 25% 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, yield, 5 mm/min	61	MPa	ISO 527
Tensile Stress, break, 5 mm/min	60	MPa	ISO 527
Tensile Strain, yield, 5 mm/min	6.6	%	ISO 527
Tensile Strain, break, 5 mm/min	7	%	ISO 527
Tensile Modulus, 1 mm/min	5670	MPa	ISO 527
Flexural Stress	87	MPa	ISO 178
Flexural Modulus, 2 mm/min	5200	MPa	ISO 178
Tensile Stress, yld, Type I, 5 mm/min	61	MPa	ASTM D638
Tensile Stress, brk, Type I, 5 mm/min	59	MPa	ASTM D638
Tensile Strain, yld, Type I, 5 mm/min	7	%	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	8.1	%	ASTM D638
Tensile Modulus, 50 mm/min	6190	MPa	ASTM D638
Flexural Modulus, 1.3 mm/min, 50 mm span	5480	MPa	ASTM D790
<b>IMPACT <sup>(1)</sup></b>			
Izod Impact, notched 80*10*4 +23°C	44	kJ/m <sup>2</sup>	ISO 180/1A
Izod Impact, unnotched 80*10*4 +23°C	90	kJ/m <sup>2</sup>	ISO 180/1U
Multiaxial Impact	10	J	ISO 6603
Izod Impact, notched, 23°C	529	J/m	ASTM D256
Izod Impact, unnotched, 23°C	1600	J/m	ASTM D4812
Instrumented Dart Impact Total Energy, 23°C	21	J	ASTM D3763
<b>THERMAL <sup>(1)</sup></b>			
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	232	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	132	°C	ISO 75/Af

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
HDT, 0.45 MPa, 3.2 mm, unannealed	248	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	190	°C	ASTM D648
CTE, -30°C to 30°C, flow	6.10E-05	1/°C	ASTM D696
CTE, -30°C to 30°C, xflow	6.40E-05	1/°C	ASTM D696
<b>PHYSICAL <sup>(1)</sup></b>			
Moisture Absorption (23°C / 50% RH)	0.02	%	ISO 62
Specific Gravity	1.87	-	ASTM D792
Density	1.87	g/cm <sup>3</sup>	ASTM D792
Moisture Absorption, (23°C/50% RH/24 hrs)	0.01	%	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
<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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