

# LNPTM LUBRICOMPTM COMPOUND EL002

EL-4020

## DESCRIPTION

LNP LUBRICOMP EL002 compound is based on Polyetherimide (PEI) resin containing 10% PTFE. Added features of this grade include: Wear Resistant.

GENERAL INFORMATION	
Features	Wear resistant, High temperature resistance
Fillers	Unreinforced, PTFE
Polymer Types	Polyetherimide (PEI)
Processing Techniques	Injection Molding

  

INDUSTRY	SUB INDUSTRY
Building and Construction	Building Component
Consumer	Sport /Leisure, Personal Accessory, Home Appliances, Commercial Appliance
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, yld, Type I, 5 mm/min	86	MPa	ASTM D638
Tensile Stress, brk, Type I, 5 mm/min	76	MPa	ASTM D638
Tensile Strain, yld, Type I, 5 mm/min	6.4	%	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	13.8	%	ASTM D638
Tensile Modulus, 50 mm/min	3440	MPa	ASTM D638
Flexural Stress, brk, 1.3 mm/min, 50 mm span	144	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	3040	MPa	ASTM D790
Tensile Stress, yield, 5 mm/min	82	MPa	ISO 527
Tensile Stress, break, 5 mm/min	78	MPa	ISO 527
Tensile Strain, yield, 5 mm/min	6.2	%	ISO 527
Tensile Strain, break, 5 mm/min	10.2	%	ISO 527
Tensile Modulus, 1 mm/min	2750	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	108	MPa	ISO 178
Flexural Modulus, 2 mm/min	2810	MPa	ISO 178
<b>IMPACT <sup>(1)</sup></b>			
Izod Impact, unnotched, 23°C	584	J/m	ASTM D4812
Izod Impact, notched, 23°C	53	J/m	ASTM D256
Multiaxial Impact	1	J	ISO 6603
Instrumented Dart Impact Total Energy, 23°C	6	J	ASTM D3763
Izod Impact, unnotched 80°10°4 +23°C	38	kJ/m²	ISO 180/1U
Izod Impact, notched 80°10°4 +23°C	5	kJ/m²	ISO 180/1A

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
<b>THERMAL <sup>(1)</sup></b>			
HDT, 0.45 MPa, 3.2 mm, unannealed	203	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	193	°C	ASTM D648
CTE, -30°C to 30°C, flow	4.8E-05	1/°C	ASTM D696
CTE, -30°C to 30°C, xflow	4.7E-05	1/°C	ASTM D696
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	201	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	186	°C	ISO 75/Af
<b>PHYSICAL <sup>(1)</sup></b>			
Specific Gravity	1.32	-	ASTM D792
Density	1.31	g/cm <sup>3</sup>	ASTM D792
Moisture Absorption, (23°C/50% RH/24 hrs)	0.2	%	ASTM D570
Mold Shrinkage, flow, 24 hrs <sup>(2)</sup>	0.7 – 0.9	%	ASTM D955
Mold Shrinkage, xflow, 24 hrs <sup>(2)</sup>	0.8 – 1	%	ASTM D955
Wear Factor Washer	185	10 <sup>-10</sup> in <sup>4</sup> 5-min/ft-lb-hr	ASTM D3702 Modified: Manual
Dynamic COF	0.32	-	ASTM D3702 Modified: Manual
Static COF	0.29	-	ASTM D3702 Modified: Manual
Moisture Absorption (23°C / 50% RH)	0.3	%	ISO 62
<b>INJECTION MOLDING <sup>(3)</sup></b>			
Drying Temperature	150	°C	
Drying Time	4 – 6	Hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	360 – 375	°C	
Rear - Zone 1 Temperature	355 – 365	°C	
Middle - Zone 2 Temperature	360 – 370	°C	
Front - Zone 3 Temperature	365 – 375	°C	
Nozzle Temperature	365 – 375	°C	
Mold Temperature	140 – 180	°C	
Back Pressure	0.3 – 0.7	MPa	
Screw speed (Circumferential speed)	0.2 – 0.3	m/s	
Vent Depth	0.025 – 0.076	mm	

- (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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