

# LNPTM LUBRICOMPTM COMPOUND DFL12

DFL-4012

REGION AMERICAS

## DESCRIPTION

LNP LUBRICOMP DFL12 compound is based on Polycarbonate (PC) resin containing 10% glass fiber and 5% PTFE. Added features of this grade include: Wear Resistant.

GENERAL INFORMATION	
Features	Wear resistant
Fillers	Glass Fiber, PTFE
Polymer Types	Polycarbonate (PC)
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	76	MPa	ASTM D638
Tensile Stress, brk, Type I, 5 mm/min	72	MPa	ASTM D638
Tensile Strain, yld, Type I, 5 mm/min	3.6	%	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	5.1	%	ASTM D638
Tensile Modulus, 5 mm/min	4130	MPa	ASTM D638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	132	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	4100	MPa	ASTM D790
Tensile Stress, yield, 5 mm/min	74	MPa	ISO 527
Tensile Stress, break, 5 mm/min	72	MPa	ISO 527
Tensile Strain, yield, 5 mm/min	3.5	%	ISO 527
Tensile Strain, break, 5 mm/min	4.8	%	ISO 527
Tensile Modulus, 1 mm/min	4120	MPa	ISO 527
Flexural Stress	120	MPa	ISO 178
Flexural Modulus, 2 mm/min	3670	MPa	ISO 178
<b>IMPACT <sup>(1)</sup></b>			
Izod Impact, unnotched, 23°C	740	J/m	ASTM D4812
Izod Impact, notched, 23°C	120	J/m	ASTM D256
Multiaxial Impact	6	J	ISO 6603

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Instrumented Dart Impact Total Energy, 23°C	22	J	ASTM D3763
Izod Impact, unnotched 80°10°4 +23°C	52	kJ/m <sup>2</sup>	ISO 180/1U
Izod Impact, notched 80°10°4 +23°C	12	kJ/m <sup>2</sup>	ISO 180/1A
<b>THERMAL <sup>(1)</sup></b>			
HDT, 0.45 MPa, 3.2 mm, unannealed	144	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	139	°C	ASTM D648
CTE, -30°C to 30°C, flow	5.E-05	1/°C	ASTM D696
CTE, -30°C to 30°C, xflow	6.2E-05	1/°C	ASTM D696
HDT/Bf, 0.45 MPa Flatw 80°10°4 sp=64mm	144	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80°10°4 sp=64mm	138	°C	ISO 75/Af
<b>PHYSICAL <sup>(1)</sup></b>			
Specific Gravity	1.29	-	ASTM D792
Density	1.3	g/cm <sup>3</sup>	ASTM D792
Moisture Absorption, (23°C/50% RH/24 hrs)	0.09	%	ASTM D570
Mold Shrinkage, flow, 24 hrs <sup>(2)</sup>	0.5 – 0.7	%	ASTM D955
Mold Shrinkage, xflow, 24 hrs <sup>(2)</sup>	0.6 – 0.8	%	ASTM D955
Wear Factor Washer	126	10 <sup>-10</sup> in <sup>^5</sup> -min/ft-lb-hr	ASTM D3702 Modified: Manual
Wear Factor Ring	6	10 <sup>-10</sup> in <sup>^5</sup> -min/ft-lb-hr	ASTM D3702 Modified: Manual
Dynamic COF	0.37	-	ASTM D3702 Modified: Manual
Static COF	0.44	-	ASTM D3702 Modified: Manual
Moisture Absorption (23°C / 50% RH)	0.13	%	ISO 62
<b>FLAME CHARACTERISTICS <sup>(3)</sup></b>			
UL Yellow Card Link	<a href="https://www.ul.com/Products/121562-101344609">E121562-101344609</a>	-	-
UL Recognized, 94V-1 Flame Class Rating	≥3	mm	UL 94
<b>INJECTION MOLDING <sup>(4)</sup></b>			
Drying Temperature	120	°C	
Drying Time	4	Hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	305 – 325	°C	
Front - Zone 3 Temperature	320 – 330	°C	
Middle - Zone 2 Temperature	310 – 320	°C	
Rear - Zone 1 Temperature	295 – 305	°C	
Mold Temperature	80 – 110	°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) 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.

(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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