

# LNPTM LUBRICOMPTM COMPOUND DFL34

DFL-4034

## DESCRIPTION

LNP LUBRICOMP DFL34 compound is based on Polycarbonate (PC) resin containing 20% glass fiber, 15% 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 Modulus, 5 mm/min	6600	MPa	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	3.3	%	ASTM D638
Tensile Stress, brk, Type I, 5 mm/min	95	MPa	ASTM D638
Flexural Modulus, 1.3 mm/min, 50 mm span	5600	MPa	ASTM D790
Flexural Strength, 1.3 mm/min, 50 mm span	148	MPa	ASTM D790
Tensile Modulus, 1 mm/min	6600	MPa	ISO 527
Tensile Strain, break, 5 mm/min	2.8	%	ISO 527
Tensile Stress, break, 5 mm/min	97	MPa	ISO 527
Flexural Modulus, 2 mm/min	6000	MPa	ISO 178
Flexural Strength, 2 mm/min	150	MPa	ISO 178
<b>IMPACT <sup>(1)</sup></b>			
Izod Impact, notched, 23°C	150	J/m	ASTM D256
Izod Impact, unnotched, 23°C	700	J/m	ASTM D4812
Instrumented Dart Impact Energy @ peak, 23°C	22	J	ASTM D3763
Izod Impact, notched 80*10*4 +23°C	15	kJ/m <sup>2</sup>	ISO 180/1A
Izod Impact, unnotched 80*10*4 +23°C	49	kJ/m <sup>2</sup>	ISO 180/1U
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	21	kJ/m <sup>2</sup>	ISO 179/1eA
Charpy 23°C, Unnotch Edgew 80*10*4 sp=62mm	61	kJ/m <sup>2</sup>	ISO 179/1eU
Multiaxial Impact	7	J	ISO 6603
<b>THERMAL <sup>(1)</sup></b>			

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
HDT, 0.45 MPa, 3.2 mm, unannealed	147	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	143	°C	ASTM D648
Vicat Softening Temp, Rate B/50	148	°C	ASTM D1525
CTE, -40°C to 40°C, flow	2.8E-05	1/°C	ASTM E831
CTE, -40°C to 40°C, xflow	6.6E-05	1/°C	ASTM E831
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	142	°C	ISO 75/Af
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	146	°C	ISO 75/Bf
Vicat Softening Temp, Rate B/50	148	°C	ISO 306
Vicat Softening Temp, Rate B/120	150	°C	ISO 306
CTE, -40°C to 40°C, flow	2.8E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	6.6E-05	1/°C	ISO 11359-2
CTE, 23°C to 60°C, flow	2.5E-05	1/°C	ISO 11359-2
CTE, 23°C to 60°C, xflow	7.8E-05	1/°C	ISO 11359-2
Relative Temp Index, Elec <sup>(2)</sup>	80	°C	UL 746B
Relative Temp Index, Mech w/impact <sup>(2)</sup>	80	°C	UL 746B
Relative Temp Index, Mech w/o impact <sup>(2)</sup>	80	°C	UL 746B
<b>PHYSICAL <sup>(1)</sup></b>			
Density	1.45	g/cm <sup>3</sup>	ASTM D792
Specific Gravity	1.45	-	ASTM D792
Moisture Absorption, (23°C/50% RH/24 hrs)	0.1 – 0.2	%	ASTM D570
Water Absorption, (23°C/24hrs)	0.1 – 0.2	%	ASTM D570
Melt Flow Rate, 300°C/2.16 kgf	8.8	g/10 min	ASTM D1238
Dynamic COF	0.48	-	ASTM D3702 Modified: Manual
Static COF	0.64	-	ASTM D3702 Modified: Manual
Wear Factor Washer	76	10 <sup>-4</sup> in <sup>3</sup> -min/ft-lb-hr	ASTM D3702 Modified: Manual
Density	1.45	g/cm <sup>3</sup>	ISO 1183
Moisture Absorption (23°C / 50% RH)	0.1 – 0.2	%	ISO 62
Water Absorption, (23°C/24hrs)	0.1 – 0.2	%	ISO 62-1
Melt Volume Rate, MVR at 300°C/2.16 kg	5	cm <sup>3</sup> /10 min	ISO 1133
Mold Shrinkage, flow <sup>(3)</sup>	0.2 – 0.4	%	SABIC method
Mold Shrinkage, xflow <sup>(3)</sup>	0.3 – 0.6	%	SABIC method
<b>ELECTRICAL <sup>(1) (2)</sup></b>			
Comparative Tracking Index (UL) {PLC}	3	PLC Code	UL 746A
High Amp Arc Ignition (HAI), PLC 2	≥3	mm	UL 746A
Hot-Wire Ignition (HWI), PLC 0	≥3	mm	UL 746A
<b>FLAME CHARACTERISTICS <sup>(2)</sup></b>			
UL Yellow Card Link	<a href="#">E121562-101344537</a>	-	-
UL Recognized, 94V-1 Flame Class Rating	≥3	mm	UL 94
UL Yellow Card Link 2	<a href="#">E45329-101344452</a>	-	-
<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	
Rear - Zone 1 Temperature	295 – 305	°C	

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Middle - Zone 2 Temperature	310 – 320	°C	
Front - Zone 3 Temperature	320 – 330	°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) 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.
- (3) 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.
- (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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