

LNPT[™] LUBRICOMP[™] COMPOUND DL004

DL-4040

REGION AMERICAS

DESCRIPTION

LNP LUBRICOMP DL004 compound is based on Polycarbonate (PC) resin containing 20% PTFE. Added features of this grade include: Wear Resistant.

GENERAL INFORMATION

Features	Wear resistant
Fillers	Unreinforced, PTFE
Polymer Types	Polycarbonate (PC)
Processing Techniques	Injection Molding

INDUSTRY

Building and Construction
Consumer
Electrical and Electronics
Industrial

SUB INDUSTRY

Building Component
Sport /Leisure, Personal Accessory, Home Appliances, Commercial Appliance
Mobile Phone - Computer - Tablets
Electrical

TYPICAL PROPERTY VALUES

Revision 20231109

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL ⁽¹⁾			
Tensile Stress, yld, Type I, 5 mm/min	43	MPa	ASTM D638
Tensile Stress, brk, Type I, 5 mm/min	39	MPa	ASTM D638
Tensile Strain, yld, Type I, 5 mm/min	6.2	%	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	28.9	%	ASTM D638
Tensile Modulus, 50 mm/min	2080	MPa	ASTM D638
Flexural Stress	73	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	2060	MPa	ASTM D790
Tensile Stress, yield, 5 mm/min	44	MPa	ISO 527
Tensile Stress, break, 5 mm/min	39	MPa	ISO 527
Tensile Strain, yield, 5 mm/min	5.9	%	ISO 527
Tensile Strain, break, 5 mm/min	29.3	%	ISO 527
Tensile Modulus, 1 mm/min	2050	MPa	ISO 527
Flexural Stress	63	MPa	ISO 178
Flexural Modulus, 2 mm/min	1930	MPa	ISO 178
IMPACT ⁽¹⁾			
Izod Impact, unnotched, 23°C	1870	J/m	ASTM D4812
Izod Impact, notched, 23°C	107	J/m	ASTM D256
Instrumented Dart Impact Energy @ peak, 23°C	24	J	ASTM D3763
Multiaxial Impact	21	J	ISO 6603
Instrumented Dart Impact Total Energy, 23°C	24	J	ASTM D3763

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CHEMISTRY THAT MATTERS[™]

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Izod Impact, unnotched 80*10*4 +23°C	178	kJ/m ²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	11	kJ/m ²	ISO 180/1A
THERMAL ⁽¹⁾			
HDT, 0.45 MPa, 3.2 mm, unannealed	141	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	128	°C	ASTM D648
CTE, -40°C to 40°C, flow	7.74E-05	1/°C	ASTM E831
CTE, -40°C to 40°C, xflow	7.56E-05	1/°C	ASTM E831
CTE, -40°C to 40°C, flow	7.7E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	7.6E-05	1/°C	ISO 11359-2
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	143	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	129	°C	ISO 75/Af
PHYSICAL ⁽¹⁾			
Specific Gravity	1.3	-	ASTM D792
Density	1.3	g/cm ³	ASTM D792
Moisture Absorption, (23°C/50% RH/24 hrs)	0.25	%	ASTM D570
Mold Shrinkage, flow, 24 hrs ⁽²⁾	0.5 – 0.7	%	ASTM D955
Mold Shrinkage, xflow, 24 hrs ⁽²⁾	0.6 – 0.8	%	ASTM D955
Mold Shrinkage, flow, 24 hrs ⁽²⁾	0.59	%	ISO 294
Mold Shrinkage, xflow, 24 hrs ⁽²⁾	0.64	%	ISO 294
Wear Factor Washer	7	10 ⁻¹⁰ in ⁴ ·min/ft·lb·hr	ASTM D3702 Modified: Manual
Dynamic COF	0.25	-	ASTM D3702 Modified: Manual
Static COF	0.21	-	ASTM D3702 Modified: Manual
Density	1.3	g/cm ³	ISO 1183
Moisture Absorption (23°C / 50% RH)	0.36	%	ISO 62
FLAME CHARACTERISTICS ⁽³⁾			
UL Yellow Card Link	E121562-101282870	-	-
UL Recognized, 94V-1 Flame Class Rating	≥3	mm	UL 94
UL Recognized, 94HB Flame Class Rating	≥1.5	mm	UL 94
INJECTION MOLDING ⁽⁴⁾			
Drying Temperature	120	°C	
Drying Time	4	Hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	300 – 315	°C	
Front - Zone 3 Temperature	310 – 320	°C	
Middle - Zone 2 Temperature	305 – 315	°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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