



LNP™ LUBRICOMP™ Compound ML004

Americas: COMMERCIAL

Also known as: LNP™ LUBRICOMP™ Compound ML-4040

Product reorder name: ML004

LNP LUBRICOMP ML004 is a product based on Polypropylene containing 20% PTFE. Added features of this grade include: Wear Resistant.

TYPICAL PROPERTIES ¹	TYPICAL VALUE	Unit	Standard
MECHANICAL			
Tensile Stress, yld, Type I, 5 mm/min	330	kgf/cm ²	ASTM D 638
Tensile Stress, brk, Type I, 5 mm/min	290	kgf/cm ²	ASTM D 638
Tensile Strain, yld, Type I, 5 mm/min	5.5	%	ASTM D 638
Tensile Strain, brk, Type I, 5 mm/min	10.4	%	ASTM D 638
Tensile Modulus, 50 mm/min	19900	kgf/cm ²	ASTM D 638
Flexural Modulus, 1.3 mm/min, 50 mm span	16200	kgf/cm ²	ASTM D 790
Tensile Stress, yield, 5 mm/min	31	MPa	ISO 527
Tensile Stress, break, 5 mm/min	28	MPa	ISO 527
Tensile Modulus, 1 mm/min	1620	MPa	ISO 527
Flexural Stress	40	MPa	ISO 178
Flexural Modulus, 2 mm/min	1590	MPa	ISO 178
IMPACT			
Izod Impact, unnotched, 23°C	42	cm-kgf/cm	ASTM D 4812
Izod Impact, notched, 23°C	2	cm-kgf/cm	ASTM D 256
Multiaxial Impact	9	cm-kgf	ISO 6603
Instrumented Impact Total Energy, 23°C	37	cm-kgf	ASTM D 3763
Izod Impact, unnotched 80*10*4 +23°C	26	kJ/m ²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	2	kJ/m ²	ISO 180/1A
THERMAL			
HDT, 0.45 MPa, 3.2 mm, unannealed	115	°C	ASTM D 648
HDT, 1.82 MPa, 3.2mm, unannealed	57	°C	ASTM D 648
CTE, -30°C to 30°C, flow	1.34E+02	1/°C	ASTM D 696
CTE, -30°C to 30°C, xflow	1.26E+02	1/°C	ASTM D 696

(1) Typical values only. Variations within normal tolerances are possible for various colors. All values are measured after at least 48 hours storage at 23°C/50% relative humidity. All properties, except the melt volume and melt flow rates, are measured on injection molded samples. All samples tested under ISO test standards are prepared according to ISO 294.

(2) Only typical data for selection purposes. Not to be used for part or tool design.

(3) This rating is not intended to reflect hazards presented by this or any other material under actual fire conditions.

(4) Internal measurements according to UL standards.

(5) 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.

(6) Needs hard coat to consistently pass 60 sec Vertical Burn.



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TYPICAL PROPERTIES ¹	TYPICAL VALUE	Unit	Standard
THERMAL			
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	102	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	56	°C	ISO 75/Af
PHYSICAL			
Density	1.01	g/cm ³	ASTM D 792
Moisture Absorption, 50% RH, 24 hrs	0.02	%	ASTM D 570
Mold Shrinkage, flow, 24 hrs (5)	1 - 3	%	ASTM D 955
Mold Shrinkage, xflow, 24 hrs (5)	1 - 3	%	ASTM D 955
Wear Factor Washer	109	10 ⁻¹⁰ in ⁵ -min/ft-lb-hr	ASTM D 3702 Modified
Wear Factor Ring	13	10 ⁻¹⁰ in ⁵ -min/ft-lb-hr	ASTM D 3702 Modified
Dynamic COF	0.89	-	ASTM D 3702 Modified
Static COF	0.7	-	ASTM D 3702 Modified
Density	1.02	g/cm ³	ISO 1183
Moisture Absorption (23°C / 50% RH)	0.01	%	ISO 62

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PROCESSING PARAMETERS	TYPICAL VALUE	Unit
Injection Molding		
Drying Temperature	80	°C
Drying Time	4	hrs
Melt Temperature	225 - 250	°C
Front - Zone 3 Temperature	240 - 250	°C
Middle - Zone 2 Temperature	215 - 225	°C
Rear - Zone 1 Temperature	195 - 205	°C
Mold Temperature	30 - 50	°C
Back Pressure	0.2 - 0.3	MPa
Screw Speed	30 - 60	rpm

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