

LNP* Lubricomp* Compound KL004

Asia Pacific: COMMERCIAL

Also known as: 404

Product Reorder name:KL004

LNP Lubricomp* KL004 is a compound based on Acetal Copolymer resin containing PTFE. Added features of this material include: Internally Lubricated. This grade was previously found under the LNP* Fulton* Tradename.

TYPICAL PROPERTIES ¹	TYPICAL VALUE	UNIT	STANDARD
MECHANICAL			
Tensile Stress, yield	51	MPa	ASTM D 638
Tensile Stress, break	50	MPa	ASTM D 638
Tensile Strain, yield	11	%	ASTM D 638
Tensile Strain, break	18	%	ASTM D 638
Tensile Modulus, 50 mm/min	2130	MPa	ASTM D 638
Flexural Stress	75	MPa	ASTM D 790
Flexural Modulus	2060	MPa	ASTM D 790
Tensile Stress, yield	47	MPa	ISO 527
Tensile Stress, break	46	MPa	ISO 527
Tensile Strain, yield	10	%	ISO 527
Tensile Strain, break	23	%	ISO 527
Tensile Modulus, 1 mm/min	2400	MPa	ISO 527
Flexural Stress	79	MPa	ISO 178
Flexural Modulus	2600	MPa	ISO 178
IMPACT			
Izod Impact, unnotched, 23°C	640	J/m	ASTM D 4812
Izod Impact, notched, 23°C	42	J/m	ASTM D 256
Instrumented Impact Energy @ peak, 23°C	6	J	ASTM D 3763
Multiaxial Impact	0	J	ISO 6603
Izod Impact, unnotched 80*10*4 +23°C	45	kJ/m ²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	4	kJ/m ²	ISO 180/1A
THERMAL			
HDT, 0.45 MPa, 3.2 mm, unannealed	157	°C	ASTM D 648
HDT, 1.82 MPa, 3.2mm, unannealed	99	°C	ASTM D 648
CTE, -40°C to 40°C, flow	1.1E-04	1/°C	ASTM E 831
CTE, -40°C to 40°C, xflow	1.11E-04	1/°C	ASTM E 831
CTE, -40°C to 40°C, flow	1.1E-04	1/°C	ISO 11359-2

1) Typical values only. Variations within normal tolerances are possible for various colours. All values are measured at least after 48 hours storage at 23°C/50% relative humidity.
All properties, except the melt volume rate are measured on injection moulded samples.
All samples are prepared according to ISO 294.

2) Only typical data for material selection purpose. 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) Own measurement according to UL.
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.

Source, GMD, Last Update:

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TYPICAL PROPERTIES ¹	TYPICAL VALUE	UNIT	STANDARD
THERMAL			
CTE, -40°C to 40°C, xflow	1.11E-04	1/°C	ISO 11359-2
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	98	°C	ISO 75/Af
PHYSICAL			
Density	1.5	g/cm ³	ASTM D 792
Moisture Absorption, 50% RH, 24 hrs	0.15	%	ASTM D 570
Mold Shrinkage, flow, 24 hrs (5)	1.97 - 2.5	%	ASTM D 955
Mold Shrinkage, xflow, 24 hrs (5)	1.97 - 2.5	%	ASTM D 955
Mold Shrinkage, flow, 24 hrs (5)	1.97 - 2.5	%	ISO 294
Mold Shrinkage, xflow, 24 hrs (5)	1.97 - 2.5	%	ISO 294
Wear Factor Washer	15	10 ⁻⁴ in ³ /min/ft-lb-hr	ASTM D 3702 Modified
Dynamic COF	0.29	-	ASTM D 3702 Modified
Static COF	0.15	-	ASTM D 3702 Modified
Density	1.5	g/cm ³	ISO 1183
Moisture Absorption (23°C / 50% RH)	0.26	%	ISO 62

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PROCESSING PARAMETERS	TYPICAL VALUE	UNIT
Injection Molding		
Drying Temperature	80	°C
Drying Time	4	hrs
Melt Temperature	200 - 215	°C
Front - Zone 3 Temperature	210 - 220	°C
Middle - Zone 2 Temperature	195 - 205	°C
Rear - Zone 1 Temperature	175 - 190	°C
Mold Temperature	80 - 110	°C
Back Pressure	0.2 - 0.3	MPa
Screw Speed	30 - 60	rpm

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