LNP™ LUBRICOMP™ COMPOUND RL004

RL-4040

DESCRIPTION

LNP LUBRICOMP RL004 compound is based on Nylon 6/6 resin containing 20% PTFE. Added features of this grade include: Wear Resistant

GENERAL INFORMATION	
Features	Wear resistant
Fillers	Unreinforced, PTFE
Polymer Types	Polyamide 66 (Nylon 66)
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 20260720

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Modulus, 5 mm/min	3000	MPa	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	6.7	%	ASTM D638
Tensile Stress, brk, Type I, 5 mm/min	71	MPa	ASTM D638
Flexural Modulus			
1.3 mm/min, 50 mm span	2450	MPa	ASTM D790
2 mm/min	2500	MPa	ISO 178
2 mm/min, 60°C	1400	MPa	ISO 178
2 mm/min, 100°C	700	MPa	ISO 178
Flexural Strength, 1.3 mm/min, 50 mm span	91	MPa	ASTM D790
Hardness, Rockwell M	56	-	ASTM D785
Hardness, Rockwell R	110	-	ASTM D785
Tensile Modulus, 1 mm/min	2900	MPa	ISO 527
Tensile Strain, break, 5 mm/min	9.4	%	ISO 527
Tensile Stress, break, 5 mm/min	65	MPa	ISO 527
Flexural Strain, break, 2 mm/min	7	%	ISO 178
Flexural Strain, break, 2 mm/min, 60°C	7	%	ISO 178
Flexural Strain, break, 2 mm/min, 100°C	7	%	ISO 178
Flexural Stress, yield			
2 mm/min	90	MPa	ISO 178
2 mm/min, 60°C	35	MPa	ISO 178
2 mm/min, 100°C	18	MPa	ISO 178

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
IMPACT [1]			
Izod impact, notched			
23°C	35	J/m	ASTM D256
80*10*4 +23°C	5	kJ/m²	ISO 180/1A
Izod Impact, Unnotched			
23°C	600	J/m	ASTM D4812
80*10*4 +23°C	50	kJ/m²	ISO 180/1U
Instrumented Dart Impact Total Energy, 23°C	4	J	ASTM D3763
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	5	kJ/m²	ISO 179/1eA
Charpy 23°C, Unnotch Edgew 80*10*4 sp=62mm	65	kJ/m²	ISO 179/1eU
THERMAL [1]			
Vicat Softening Temp, Rate B/50	240	°C	ASTM D1525
HDT, 0.45 MPa, 3.2 mm, unannealed	239	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	70	°C	ASTM D648
CTE, -30°C to 30°C, flow	9.0E-05	1/°C	ASTM D696
CTE, -30°C to 30°C, xflow	8.8E-05	1/°C	ASTM D696
CTE, 23°C to 60°C, flow	9.7E-05	1/°C	ISO 11359-2
CTE, 23°C to 60°C, xflow	1.2E-04	1/°C	ISO 11359-2
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	70	°C	ISO 75/Af
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	201	°C	ISO 75/Bf
Vicat Softening Temp, Rate B/120	230	°C	ISO 306
Vicat Softening Temp, Rate B/50	240	°C	ISO 306
Relative Temp Index, Elec [2]	65	°C	UL 746B
Relative Temp Index, Mech w/impact [2]	65	°C	UL 746B
Relative Temp Index, Mech w/o impact [2]	65	°C	UL 746B
PHYSICAL [1]			
Density	1.25	g/cm³	ASTM D792
Moisture Absorption, (23°C/50% RH/24 hrs)	0.8 – 1.2	%	ASTM D570
Water Absorption, (23°C/24hrs)	1 – 1.2	%	ASTM D570
Dynamic COF	0.27	-	ASTM D3702 Modified: Manual
Static COF	0.2	-	ASTM D3702 Modified: Manual
Wear Factor Washer	21	10^-10 in^5-min/ft-lb-hr	ASTM D3702 Modified: Manual
Density	1.25	g/cm³	ISO 1183
Moisture Absorption (23°C / 50% RH)	0.8 – 1.2	%	ISO 62
Water Absorption, (23°C/24hrs)	1 – 1.2	%	ISO 62-1
Melt Volume Rate			
275°C/2.16 kg	24 – 32	cm³/10 min	ISO 1133
Mold Shrinkage, flow [3]	1 – 3	%	SABIC method
Mold Shrinkage, xflow [3]	1 – 3	%	SABIC method
FLAME CHARACTERISTICS [2]			
UL Yellow Card Link	E121562-101282879	-	-
UL Yellow Card Link 2	E45329-101344479	-	-
UL Recognized, 94HB Flame Class Rating	1.5	mm	UL 94
INJECTION MOLDING [4]			
Drying Temperature	80	°C	

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Drying Time	4	Hrs	
Maximum Moisture Content	0.15 – 0.25	%	
Melt Temperature	275 – 290	°C	
Rear - Zone 1 Temperature	265 – 275	°C	
Middle - Zone 2 Temperature	280 – 295	°C	
Front - Zone 3 Temperature	295 – 305	°C	
Mold Temperature	80 – 95	°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.

MORE INFORMATION

For curve data and CAE cards, please visit and register at https://materialfinder.sabic-specialties.com

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