LNP™ LUBRICOMP™ COMPOUND DL003

DL-4030

DESCRIPTION

LNP LUBRICOMP DL003 compound is based on Polycarbonate (PC) resin containing 15% 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	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
MECHANICAL [1]			
Tensile Modulus, 50 mm/min	2150	MPa	ASTM D638
Tensile Strain, brk, Type I, 50 mm/min	37.6	%	ASTM D638
Tensile Strain, yld, Type I, 50 mm/min	6.1	%	ASTM D638
Tensile Stress, yld, Type I, 50 mm/min	51	MPa	ASTM D638
Flexural Modulus, 1.3 mm/min, 50 mm span	2190	MPa	ASTM D790
Flexural Strength, 1.3 mm/min, 50 mm span	82	MPa	ASTM D790
Flexural Modulus, 2 mm/min	2100	MPa	ISO 178
Flexural Strength, 2 mm/min	81	MPa	ISO 178
Tensile Modulus, 1 mm/min	2200	MPa	ISO 527
Tensile Strain, break, 50 mm/min	20	%	ISO 527
Tensile Strain, yield, 50 mm/min	5.1	%	ISO 527
Tensile Stress, yield, 50 mm/min	54	MPa	ISO 527
IMPACT [1]			
Izod Impact, notched, 23°C	280	J/m	ASTM D256
Izod Impact, unnotched, 23°C	NB	J/m	ASTM D4812
Instrumented Dart Impact Energy @ peak, 23°C	30	J	ASTM D3763
Izod Impact, notched 80*10*4 +23°C	20	kJ/m²	ISO 180/1A
Izod Impact, unnotched 80*10*4 +23°C	140	kJ/m²	ISO 180/1U
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	22	kJ/m²	ISO 179/1eA
Charpy 23°C, Unnotch Edgew 80*10*4 sp=62mm	180	kJ/m²	ISO 179/1eU
Multiaxial Impact	34	J	ISO 6603

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
THERMAL [1]			
HDT, 1.82 MPa, 3.2mm, unannealed	127	°C	ASTM D648
CTE, 23°C to 60°C, flow	7.6E-05	1/°C	ISO 11359-2
CTE, 23°C to 60°C, xflow	9.8E-05	1/°C	ISO 11359-2
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	128	°C	ISO 75/Af
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	138	°C	ISO 75/Bf
Vicat Softening Temp, Rate B/50	144	°C	ASTM D1525
Vicat Softening Temp, Rate B/120	144	°C	ISO 306
Vicat Softening Temp, Rate B/50	144	°C	ISO 306
PHYSICAL [1]			
Density	1.28	g/cm³	ASTM D792
Moisture Absorption, (23°C/50% RH/24 hrs)	0.05 – 0.2	%	ASTM D570
Water Absorption, (23°C/24hrs)	0.2 – 0.3	%	ASTM D570
Melt Flow Rate, 300°C/1.2 kgf	6.2	g/10 min	ASTM D1238
Wear Factor Washer	60	10^-10 in^5-min/ft-lb-hr	ASTM D3702 Modified: Manual
Dynamic COF	0.18	-	ASTM D3702 Modified: Manual
Static COF	0.26	-	ASTM D3702 Modified: Manual
Density	1.28	g/cm³	ISO 1183
Moisture Absorption (23°C / 50% RH)	0.05 – 0.2	%	ISO 62
Water Absorption, (23°C/24hrs)	0.2 – 0.3	%	ISO 62-1
Melt Volume Rate, MVR at 300°C/1.2 kg	5.8	cm³/10 min	ISO 1133
Mold Shrinkage, flow [2]	0.7 – 0.9	%	SABIC method
Mold Shrinkage, xflow [2]	0.7 – 0.9	%	SABIC method
FLAME CHARACTERISTICS [3]			
UL Yellow Card Link 2	E207780-101343861	-	-
UL Yellow Card Link 3	E45329-101344454	-	-
UL Yellow Card Link	E121562-101282870	-	-
UL Recognized, 94HB Flame Class Rating	≥1.5	mm	UL 94
UL Recognized, 94V-1 Flame Class Rating	≥3	mm	UL 94
INJECTION MOLDING [4]			
Drying Temperature	120	°C	
Drying Time	4	Hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	300 – 315	°C	
Rear - Zone 1 Temperature	295 – 305	°C	
Middle - Zone 2 Temperature	305 – 315	°C	
Front - Zone 3 Temperature	310 – 320	°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.

DISCLAIMER