LNP™ LUBRICOMP™ COMPOUND LL003XX1

DESCRIPTION

LNP LUBRICOMP LL003XX1 compound is based on Polyetheretherketone (PEEK) resin containing 15% PTFE lubricant. Added features of this grade include: Easy Molding, Excellent Wear Resistance and Very Low Coefficient of Friction (CoF)

GENERAL INFORMATION	
Features	Good Processability, Wear resistant, High temperature resistance
Fillers	Unreinforced, PTFE
Polymer Types	Polyetheretherketone (PEEK)
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]			
Flexural Strength, 1.3 mm/min, 50 mm span	121	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	3100	MPa	ASTM D790
Tensile Stress, brk, Type I, 5 mm/min	75	MPa	ASTM D638
Tensile Modulus, 5 mm/min	3200	MPa	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	50	%	ASTM D638
Flexural Strength, 2 mm/min	123	MPa	ISO 178
Flexural Modulus, 2 mm/min	2900	MPa	ISO 178
Tensile Stress, break, 5 mm/min	70	MPa	ISO 527
Tensile Modulus, 1 mm/min	3100	MPa	ISO 527
Tensile Strain, break, 5 mm/min	15	%	ISO 527
IMPACT [1]			
Izod Impact, notched, 23°C	76	J/m	ASTM D256
Izod Impact, unnotched, 23°C	1230	J/m	ASTM D4812
Izod Impact, notched 80*10*4 +23°C	7	kJ/m²	ISO 180/1A
Izod Impact, unnotched 80*10*4 +23°C	95	kJ/m²	ISO 180/1U
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	7	kJ/m²	ISO 179/1eA
Charpy 23°C, Unnotch Edgew 80*10*4 sp=62mm	135	kJ/m²	ISO 179/1eU
Multiaxial Impact	2.46	J	ASTM D3763
THERMAL [1]			
HDT, 1.82 MPa, 3.2mm, unannealed	148	°C	ASTM D648
HDT, 0.45 MPa, 3.2 mm, unannealed	162	°C	ASTM D648

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	148	°C	ISO 75/Af
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	172	°C	ISO 75/Bf
CTE, -40°C to 120°C, flow	4.9E-05	1/°C	ASTM E831
CTE, -40°C to 120°C, xflow	5.8E-05	1/°C	ASTM E831
PHYSICAL (1)			
Dynamic COF	0.29	-	ASTM D3702 Modified: Manual
Static COF	0.25	-	ASTM D3702 Modified: Manual
Wear Factor Ring	36	10^-10 in^5-min/ft-lb-hr	ASTM D3702 Modified: Manual
Specific Gravity	1.36	-	ASTM D792
Mold Shrinkage, flow, 24 hrs (2)	0.3 – 0.4	%	ASTM D955
Mold Shrinkage, xflow, 24 hrs (2)	0.4 – 0.5	%	ASTM D955
Density	1.36	g/cm³	ASTM D792
Moisture Absorption (23°C / 50% RH)	0.01	%	ISO 62
ELECTRICAL (1)			
Dielectric Constant, 1.1 GHz	3	-	SABIC method
Dielectric Constant, 1.9 GHz	0.0026	-	SABIC method
Dissipation Factor, 1.1 GHz	3.01	-	SABIC method
Dissipation Factor, 1.9 GHz	0.0028	-	SABIC method
INJECTION MOLDING (3)			
Drying Temperature	120 – 150	°C	
Drying Time	3 – 5	Hrs	
Nozzle Temperature	380 – 400	°C	
Melt Temperature	380 – 400	°C	
Front - Zone 3 Temperature	370 – 380	°C	
Middle - Zone 2 Temperature	360 – 370	°C	
Rear - Zone 1 Temperature	290 – 300	°C	
Mold Temperature	170 – 200	°C	
Screw Speed	50 – 100	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) 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