LNP™ LUBRICOMP™ COMPOUND LL003

LL-4030

DESCRIPTION

LNP LUBRICOMP LL003 compound is based on Polyetheretherketone (PEEK) resin containing 15% PTFE. Added features of this grade include: Wear Resistant.

GENERAL INFORMATION	
Features	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

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Stress, yld, Type I, 5 mm/min	64	MPa	ASTM D638
Tensile Stress, brk, Type I, 5 mm/min	64	MPa	ASTM D638
Tensile Strain, yld, Type I, 5 mm/min	4.5	%	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	4.5	%	ASTM D638
Tensile Modulus, 50 mm/min	3000	MPa	ASTM D638
Flexural Modulus, 1.3 mm/min, 50 mm span	2940	MPa	ASTM D790
Tensile Stress, yield, 5 mm/min	62	MPa	ISO 527
Tensile Stress, break, 5 mm/min	62	MPa	ISO 527
Tensile Strain, yield, 5 mm/min	3.3	%	ISO 527
Tensile Strain, break, 5 mm/min	3.3	%	ISO 527
Tensile Modulus, 1 mm/min	3070	MPa	ISO 527
Flexural Stress	92	MPa	ISO 178
Flexural Modulus, 2 mm/min	2750	MPa	ISO 178
IMPACT [1]			
Izod Impact, unnotched, 23°C	723	J/m	ASTM D4812
Izod Impact, notched, 23°C	48	J/m	ASTM D256
Instrumented Dart Impact Total Energy, 23°C	3	J	ASTM D3763
Izod Impact, unnotched 80*10*4 +23°C	37	kJ/m²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	5	kJ/m²	ISO 180/1A
THERMAL [1]			
HDT, 0.45 MPa, 3.2 mm, unannealed	156	°C	ASTM D648

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
HDT, 1.82 MPa, 3.2mm, unannealed	146	°C	ASTM D648
CTE, -30°C to 30°C, flow	4.7E-05	1/°C	ASTM D696
CTE, -30°C to 30°C, xflow	5.7E-05	1/°C	ASTM D696
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	156	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	147	°C	ISO 75/Af
PHYSICAL [1]			
Specific Gravity	1.39	-	ASTM D792
Density	1.39	g/cm³	ASTM D792
Moisture Absorption, (23°C/50% RH/24 hrs)	0.07	%	ASTM D570
Mold Shrinkage, flow, 24 hrs [2]	0.9 – 2	%	ASTM D955
Mold Shrinkage, xflow, 24 hrs [2]	1 – 3	%	ASTM D955
Wear Factor Washer	18	10^-10 in^5-min/ft-lb-hr	ASTM D3702 Modified: Manual
Dynamic COF	0.42	-	ASTM D3702 Modified: Manual
Static COF	0.32	-	ASTM D3702 Modified: Manual
Moisture Absorption (23°C / 50% RH)	0.08	%	ISO 62
INJECTION MOLDING [3]			
Drying Temperature	150	°C	
Drying Time	4 – 6	Hrs	
Front - Zone 3 Temperature	380 – 400	°C	
Middle - Zone 2 Temperature	380 – 400	°C	
Rear - Zone 1 Temperature	370 – 380	°C	
Mold Temperature	175 – 190	°C	
Back Pressure	0.3 – 0.7	MPa	
Screw Speed	60 – 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.