LNP™ LUBRICOMP™ COMPOUND LCL33

LCL-4033
REGION AMERICAS

DESCRIPTION

LNP LUBRICOMP LCL33 compound is based on Polyetheretherketone (PEEK) resin containing 15% carbon fiber, 15% PTFE. Added features of this grade include: Wear Resistant, Electrically Conductive.

GENERAL INFORMATION	
Features	Electrically Conductive, Wear resistant, Carbon fiber filled, High stiffness/Strength, High temperature resistance
Fillers	Carbon Fiber, 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]			
Tensile Stress, break	179	MPa	ASTM D638
Tensile Strain, break	1.7	%	ASTM D638
Tensile Modulus, 50 mm/min	16610	MPa	ASTM D638
Flexural Stress	262	MPa	ASTM D790
Flexural Modulus	12960	MPa	ASTM D790
Tensile Stress, break	187	MPa	ISO 527
Tensile Strain, break	1.6	%	ISO 527
Tensile Modulus, 1 mm/min	14500	MPa	ISO 527
Flexural Stress	230	MPa	ISO 178
Flexural Modulus	11700	MPa	ISO 178
IMPACT [1]			
Izod Impact, unnotched, 23°C	480	J/m	ASTM D4812
Izod Impact, notched, 23°C	64	J/m	ASTM D256
Instrumented Dart Impact Energy @ peak, 23°C	9	J	ASTM D3763
Multiaxial Impact	9	J	ISO 6603
Izod Impact, unnotched 80*10*4 +23°C	34	kJ/m²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	7	kJ/m²	ISO 180/1A
THERMAL [1]			

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
HDT, 1.82 MPa, 3.2mm, unannealed	>298	°C	ASTM D648
CTE, -40°C to 40°C, flow	2.34E-05	1/°C	ASTM E831
CTE, -40°C to 40°C, xflow	4.14E-05	1/°C	ASTM E831
CTE, -40°C to 40°C, flow	2.36E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	4.17E-05	1/°C	ISO 11359-2
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	>300	°C	ISO 75/Af
PHYSICAL (1)			
Density	1.43	g/cm³	ASTM D792
Moisture Absorption, (23°C/50% RH/24 hrs)	0.07	%	ASTM D570
Mold Shrinkage, flow, 24 hrs (2)	0.1 – 0.3	%	ASTM D955
Mold Shrinkage, xflow, 24 hrs (2)	0.4 – 0.7	%	ASTM D955
Mold Shrinkage, flow, 24 hrs (2)	0.1 – 0.3	%	ISO 294
Mold Shrinkage, xflow, 24 hrs (2)	0.3 – 0.7	%	ISO 294
Wear Factor Washer	17	10^-10 in^5-min/ft-lb-hr	ASTM D3702 Modified: Manual
Dynamic COF	0.35	-	ASTM D3702 Modified: Manual
Static COF	0.28	-	ASTM D3702 Modified: Manual
Density	1.43	g/cm³	ISO 1183
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.

DISCLAIMER