LNP™ THERMOCOMP™ COMPOUND LC003E

LC-1003 EM
REGION AMERICAS

DESCRIPTION

LNP THERMOCOMP LC003E compound is based on Polyetheretherketone (PEEK) resin containing 15% carbon fiber. Added features of this grade include: Easy Molding, Electrically Conductive

GENERAL INFORMATION	
Features	Electrically Conductive, Good Processability, Carbon fiber filled, High stiffness/Strength, High temperature resistance, No PFAS intentionally added
Fillers	Carbon Fiber
Polymer Types	Polyetheretherketone (PEEK)
Processing Techniques	Injection Molding

INDUSTRY	SUB INDUSTRY
Electrical and Electronics	Electronic Components, Mobile Phone - Computer - Tablets
Industrial	Electrical, Material Handling

TYPICAL PROPERTY VALUES

Revision 20231109

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Stress, break	153	MPa	ASTM D638
Tensile Strain, break	1.8	%	ASTM D638
Tensile Modulus, 50 mm/min	11510	MPa	ASTM D638
Flexural Stress	259	MPa	ASTM D790
Flexural Modulus	9510	MPa	ASTM D790
Tensile Stress, break	163	MPa	ISO 527
Tensile Strain, break	1.8	%	ISO 527
Tensile Modulus, 1 mm/min	10520	MPa	ISO 527
Flexural Stress	263	MPa	ISO 178
Flexural Modulus	9850	MPa	ISO 178
IMPACT [1]			
Izod Impact, unnotched, 23°C	400	J/m	ASTM D4812
Izod Impact, notched, 23°C	37	J/m	ASTM D256
Instrumented Dart Impact Energy @ peak, 23°C	4	J	ASTM D3763
Multiaxial Impact	1	J	ISO 6603
Izod Impact, unnotched 80*10*4 +23°C	29	kJ/m²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	4	kJ/m²	ISO 180/1A
THERMAL [1]			
HDT, 1.82 MPa, 3.2mm, unannealed	270	°C	ASTM D648
CTE, -40°C to 40°C, flow	5.2E-05	1/°C	ASTM E831

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
CTE, -40°C to 40°C, xflow	5.36E-05	1/°C	ASTM E831
CTE, -40°C to 40°C, flow	5.19E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	5.36E-05	1/°C	ISO 11359-2
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	298	°C	ISO 75/Af
PHYSICAL [1]			
Density	1.33	g/cm³	ASTM D792
Moisture Absorption, (23°C/50% RH/24 hrs)	0.07	%	ASTM D570
Mold Shrinkage, flow, 24 hrs [2]	0.2 – 0.3	%	ASTM D955
Mold Shrinkage, xflow, 24 hrs [2]	0.5 – 0.6	%	ASTM D955
Mold Shrinkage, flow, 24 hrs [2]	0.28 – 0.31	%	ISO 294
Mold Shrinkage, xflow, 24 hrs [2]	0.51 – 0.58	%	ISO 294
Density	1.33	g/cm³	ISO 1183
Moisture Absorption (23°C / 50% RH)	0.13	%	ISO 62
ELECTRICAL [1]			
Surface Resistivity	1.E+03 – 1.E+07	Ω	ASTM D257
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.

ADDITIONAL PRODUCT NOTES

No PFAS intentionally added: The grade listed in this document does not contain PFAS intentionally added during Seller's manufacturing process and is not expected to contain unintentional PFAS impurities. Each user is responsible for evaluating the presence of unintentional PFAS impurities.

DISCLAIMER