LNP™ THERMOCOMP™ COMPOUND LF004E

LF-1004 EM
REGION AMERICAS

DESCRIPTION

LNP THERMOCOMP LF004E compound is based on Polyetheretherketone (PEEK) resin containing 20% glass fiber. Added features of this grade include: Easy Molding.

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

INDUSTRY	SUB INDUSTRY
Consumer	Commercial Appliance
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, brk, Type I, 5 mm/min	147	MPa	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	2.3	%	ASTM D638
Tensile Modulus, 5 mm/min	8730	MPa	ASTM D638
Flexural Stress, brk, 1.3 mm/min, 50 mm span	228	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	8090	MPa	ASTM D790
Tensile Stress, break, 5 mm/min	124	MPa	ISO 527
Tensile Strain, break, 5 mm/min	1.7	%	ISO 527
Tensile Modulus, 1 mm/min	8620	MPa	ISO 527
Flexural Stress	222	MPa	ISO 178
Flexural Modulus, 2 mm/min	7720	MPa	ISO 178
IMPACT [1]			
Izod Impact, unnotched, 23°C	505	J/m	ASTM D4812
Izod Impact, notched, 23°C	42	J/m	ASTM D256
Multiaxial Impact	1	J	ISO 6603
Instrumented Dart Impact Total Energy, 23°C	6	J	ASTM D3763
Izod Impact, unnotched 80*10*4 +23°C	30	kJ/m²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	4	kJ/m²	ISO 180/1A
THERMAL [1]			
HDT, 0.45 MPa, 3.2 mm, unannealed	335	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	320	°C	ASTM D648

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
CTE, -30°C to 30°C, flow	2.8E-05	1/°C	ASTM D696
CTE, -30°C to 30°C, xflow	4.5E-05	1/°C	ASTM D696
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	332	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	305	°C	ISO 75/Af
PHYSICAL (1)			
Specific Gravity	1.45	-	ASTM D792
Density	1.43	g/cm³	ASTM D792
Moisture Absorption, (23°C/50% RH/24 hrs)	0.09	%	ASTM D570
Mold Shrinkage, flow, 24 hrs (2)	0.71	%	ASTM D955
Mold Shrinkage, xflow, 24 hrs (2)	1.2	%	ASTM D955
Moisture Absorption (23°C / 50% RH)	0.1	%	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.

DISCLAIMER