LNP™ THERMOCOMP™ COMPOUND LC006EX1

DESCRIPTION

LNP THERMOCOMP LC006EX1 compound is based on Polyetheretherketone (PEEK) resin containing 30% post-industrial-recycled (PIR) carbon fiber. Added features of this grade include High Modulus, High impact, Easy Molding and Electrically Conductive.

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

TYPICAL PROPERTY VALUES

Revision 20241022

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Stress, brk, Type I, 5 mm/min	276	MPa	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	1.7	%	ASTM D638
Tensile Modulus, 5 mm/min	26500	MPa	ASTM D638
Flexural Strength, 1.3 mm/min, 50 mm span	398	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	21300	MPa	ASTM D790
Tensile Stress, break, 5 mm/min	267	MPa	ISO 527
Tensile Strain, break, 5 mm/min	1.7	%	ISO 527
Tensile Modulus, 1 mm/min	29200	MPa	ISO 527
Flexural Strength, 2 mm/min	412	MPa	ISO 178
Flexural Modulus, 2 mm/min	25400	MPa	ISO 178
IMPACT [1]			
Izod Impact, unnotched, 23°C	860	J/m	ASTM D4812
Izod Impact, notched, 23°C	97	J/m	ASTM D256
Multiaxial Impact	8.4	J	ASTM D3763
Izod Impact, unnotched 80*10*4 +23°C	56	kJ/m²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	10	kJ/m²	ISO 180/1A
Charpy 23°C, Unnotch Edgew 80*10*3 sp=62mm	55	kJ/m²	ISO 179/1eU
Charpy 23°C, V-notch Edgew 80*10*3 sp=62mm	8	kJ/m²	ISO 179/1eA
THERMAL [1]			
HDT, 0.45 MPa, 3.2 mm, unannealed	338	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	329	°C	ASTM D648
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	337	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	322	°C	ISO 75/Af
CTE, -40°C to 120°C, flow	9.3E-06	1/°C	ASTM E831
CTE, -40°C to 120°C, xflow	3.4E-05	1/°C	ASTM E831
Relative Temp Index, Elec [2]	130	°C	UL 746B
Relative Temp Index, Mech w/impact [2]	130	°C	UL 746B
Relative Temp Index, Mech w/o impact [2]	130	°C	UL 746B

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
PHYSICAL [1]			
Moisture Absorption, (23°C/50% RH/24 hrs)	0.052	%	ASTM D570
Specific Gravity	1.423	-	ASTM D792
Mold Shrinkage, flow [3]	0.28	%	SABIC method
Mold Shrinkage, xflow [3]	1.1	%	SABIC method
Moisture Absorption, (23°C/50% RH/Equilibrium)	0.072	%	ISO 62-4
Density	1.42	g/cm³	ASTM D792
FLAME CHARACTERISTICS [2]			
UL Yellow Card Link	E121562-104576912	-	-
UL Yellow Card Link 2	E207780-104576913	-	-
UL Recognized, 94-5VA Flame Class Rating	≥3.2	mm	UL 94
UL Recognized, 94-5VB Flame Class Rating	≥1.5	mm	UL 94
UL Recognized, 94V-0 Flame Class Rating	≥1.5	mm	UL 94
INJECTION MOLDING [4]			
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) UL Ratings shown on the technical datasheet might not cover the full range of thicknesses and colors. For details, please see the UL Yellow Card.

(3) 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.

(4) 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