

LNPTM THERMOCOMPTM COMPOUND DC006

DC-1006

DESCRIPTION

LNP THERMOCOMP DC006 compound is based on Polycarbonate (PC) resin containing 30% carbon fiber. Added features of this grade include: Electrically Conductive.

GENERAL INFORMATION	
Features	Electrically Conductive, Carbon fiber filled, High stiffness/Strength, No PFAS intentionally added
Fillers	Carbon Fiber
Polymer Types	Polycarbonate (PC)
Processing Techniques	Injection Molding

INDUSTRY	SUB INDUSTRY
Building and Construction	Building Component
Consumer	Personal Accessory
Electrical and Electronics	Mobile Phone - Computer - Tablets
Industrial	Electrical

TYPICAL PROPERTY VALUES

Revision 20231109

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL ⁽¹⁾			
Tensile Stress, yield, 5 mm/min	141	MPa	ISO 527
Tensile Stress, break, 5 mm/min	141	MPa	ISO 527
Tensile Strain, yield, 5 mm/min	1.8	%	ISO 527
Tensile Strain, break, 5 mm/min	1.8	%	ISO 527
Tensile Modulus, 1 mm/min	15780	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	192	MPa	ISO 178
Flexural Modulus, 2 mm/min	14300	MPa	ISO 178
Tensile Stress, yld, Type I, 5 mm/min	141	MPa	ASTM D638
Tensile Stress, brk, Type I, 5 mm/min	141	MPa	ASTM D638
Tensile Strain, yld, Type I, 5 mm/min	1.9	%	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	1.9	%	ASTM D638
Tensile Modulus, 50 mm/min	15870	MPa	ASTM D638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	195	MPa	ASTM D790
IMPACT ⁽¹⁾			
Izod Impact, notched 80*10*4 +23°C	6	kJ/m ²	ISO 180/1A
Izod Impact, unnotched 80*10*4 +23°C	44	kJ/m ²	ISO 180/1U
Multiaxial Impact	4	J	ISO 6603
Izod Impact, notched, 23°C	69	J/m	ASTM D256
Izod Impact, unnotched, 23°C	587	J/m	ASTM D4812
Instrumented Dart Impact Energy @ peak, 23°C	12	J	ASTM D3763

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
THERMAL ⁽¹⁾			
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	148	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	143	°C	ISO 75/Af
CTE, 23°C to 60°C, flow	2.00E-05	1/°C	ISO 11359-2
CTE, 23°C to 60°C, xflow	4.40E-05	1/°C	ISO 11359-2
HDT, 0.45 MPa, 3.2 mm, unannealed	147	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	142	°C	ASTM D648
CTE, -40°C to 40°C, flow	1.1E-05	1/°C	ASTM E831
CTE, -40°C to 40°C, xflow	2.4E-05	1/°C	ASTM E831
PHYSICAL ⁽¹⁾			
Density	1.33	g/cm ³	ISO 1183
Density	1.33	g/cm ³	ASTM D792
Moisture Absorption, (23°C/50% RH/24 hrs)	0.12	%	ASTM D570
Mold Shrinkage, flow, 24 hrs ⁽²⁾	0.1 – 0.2	%	ASTM D955
Mold Shrinkage, xflow, 24 hrs ⁽²⁾	0.2 – 0.4	%	ASTM D955
Mold Shrinkage, flow ⁽²⁾	0.09	%	SABIC method
Mold Shrinkage, xflow ⁽²⁾	0.33	%	SABIC method
INJECTION MOLDING ⁽³⁾			
Drying Temperature	120	°C	
Drying Time	4	Hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	305 – 325	°C	
Front - Zone 3 Temperature	320 – 330	°C	
Middle - Zone 2 Temperature	310 – 320	°C	
Rear - Zone 1 Temperature	295 – 305	°C	
Mold Temperature	80 – 110	°C	
Back Pressure	0.2 – 0.3	MPa	
Screw Speed	30 – 60	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.

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