

LNPTTM THERMOCOMPTM COMPOUND DC0049XF

DC-1004 FR

DESCRIPTION

LNP THERMOCOMP DC0049XF compound is based on Polycarbonate (PC) resin containing 20% carbon fiber. Added features of this grade include: Electrically Conductive, Flame Retardant.

GENERAL INFORMATION	
Features	Flame Retardant, Electrically Conductive, Carbon fiber filled, High stiffness/Strength
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, break, 5 mm/min	133	MPa	ISO 527
Tensile Strain, break, 5 mm/min	1.5	%	ISO 527
Tensile Modulus, 1 mm/min	13000	MPa	ISO 527
Flexural Modulus, 2 mm/min	10540	MPa	ISO 178
Tensile Stress, brk, Type I, 5 mm/min	132	MPa	ASTM D638
Tensile Modulus, 50 mm/min	12640	MPa	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	2.1	%	ASTM D638
Flexural Strength, 1.3 mm/min, 50 mm span	202	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	11070	MPa	ASTM D790
IMPACT ⁽¹⁾			
Izod Impact, notched 80*10*4 +23°C	5	kJ/m ²	ISO 180/1A
Izod Impact, unnotched 80*10*4 +23°C	26	kJ/m ²	ISO 180/1U
Multiaxial Impact	1	J	ISO 6603
Izod Impact, notched, 23°C	58	J/m	ASTM D256
Izod Impact, unnotched, 23°C	462	J/m	ASTM D4812
THERMAL ⁽¹⁾			
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	143	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	139	°C	ISO 75/Af
HDT, 0.45 MPa, 3.2 mm, unannealed	143	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	140	°C	ASTM D648

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
CTE, -30°C to 30°C, flow	1.E-06	1/°C	ASTM D696
CTE, -30°C to 30°C, xflow	8.E-06	1/°C	ASTM D696
PHYSICAL ⁽¹⁾			
Moisture Absorption (23°C / 50% RH)	0.13	%	ISO 62
Density	1.3	g/cm ³	ASTM D792
Specific Gravity	1.31	-	ASTM D792
Moisture Absorption, (23°C/50% RH/24 hrs)	0.08	%	ASTM D570
Mold Shrinkage, flow, 24 hrs ⁽²⁾	0.3 – 0.5	%	ASTM D955
Mold Shrinkage, xflow, 24 hrs ⁽²⁾	0.4 – 0.6	%	ASTM D955
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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