

# LNPT<sup>TM</sup> THERMOCOMP<sup>TM</sup> 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
<b>MECHANICAL <sup>(1)</sup></b>			
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
<b>IMPACT <sup>(1)</sup></b>			
Izod Impact, notched 80*10*4 +23°C	5	kJ/m <sup>2</sup>	ISO 180/1A
Izod Impact, unnotched 80*10*4 +23°C	26	kJ/m <sup>2</sup>	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
<b>THERMAL <sup>(1)</sup></b>			
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
<b>PHYSICAL <sup>(1)</sup></b>			
Moisture Absorption (23°C / 50% RH)	0.13	%	ISO 62
Density	1.3	g/cm <sup>3</sup>	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 <sup>(2)</sup>	0.3 – 0.5	%	ASTM D955
Mold Shrinkage, xflow, 24 hrs <sup>(2)</sup>	0.4 – 0.6	%	ASTM D955
<b>INJECTION MOLDING <sup>(3)</sup></b>			
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.

## DISCLAIMER

Any sale by SABIC, its subsidiaries and affiliates (each a "seller"), is made exclusively under seller's standard conditions of sale (available upon request) unless agreed otherwise in writing and signed on behalf of the seller. While the information contained herein is given in good faith, SELLER MAKES NO WARRANTY, EXPRESS OR IMPLIED, INCLUDING MERCHANTABILITY AND NON-INFRINGEMENT OF INTELLECTUAL PROPERTY, NOR ASSUMES ANY LIABILITY, DIRECT OR INDIRECT, WITH RESPECT TO THE PERFORMANCE, SUITABILITY OR FITNESS FOR INTENDED USE OR PURPOSE OF THESE PRODUCTS IN ANY APPLICATION. Each customer must determine the suitability of seller materials for the customer's particular use through appropriate testing and analysis. No statement by seller concerning a possible use of any product, service or design is intended, or should be construed, to grant any license under any patent or other intellectual property right.