

# LNP™ THERMOCOMP™ DC0049XF compound

Polycarbonate

SABIC Innovative Plastics

## Message:

LNP THERMOCOMP DC0049XF is a compound based on Polycarbonate resin containing 20% Carbon Fiber. Added features of this material include: Electrically Conductive, Flame Retardant.

Also known as: LNP\* THERMOCOMP\* Compound DC-1004 FR

Product reorder name: DC0049XF

General Information			
Filler / Reinforcement	Carbon Fiber,20% Filler by Weight		
Features	Electrically Conductive Flame Retardant		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity			ASTM D792
--	1.31	g/cm <sup>3</sup>	
--	1.30	g/cm <sup>3</sup>	
Molding Shrinkage			ASTM D955
Flow : 24 hr	0.030 to 0.050	%	
Across Flow : 24 hr	0.40 to 0.60	%	
Water Absorption			
24 hr, 50% RH	0.080	%	ASTM D570
Equilibrium, 23°C, 50% RH	0.13	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- <sup>1</sup>	12600	MPa	ASTM D638
--	13000	MPa	ISO 527-2/1
Tensile Strength			
Yield <sup>2</sup>	132	MPa	ASTM D638
Yield	133	MPa	ISO 527-2/5
Break <sup>3</sup>	132	MPa	ASTM D638
Break	133	MPa	ISO 527-2/5
Tensile Elongation			
Yield <sup>4</sup>	2.1	%	ASTM D638
Yield	1.6	%	ISO 527-2/5
Break <sup>5</sup>	2.1	%	ASTM D638
Break	1.6	%	ISO 527-2/5
Flexural Modulus			
50.0 mm Span <sup>6</sup>	11100	MPa	ASTM D790

-- <sup>7</sup>	10500	MPa	ISO 178
Flexural Strength <sup>8</sup>			ASTM D790
Yield, 50.0 mm Span	202	MPa	
Break, 50.0 mm Span	202	MPa	
<b>Impact</b>	<b>Nominal Value</b>	<b>Unit</b>	<b>Test Method</b>
Notched Izod Impact			
23°C	58	J/m	ASTM D256
23°C <sup>9</sup>	5.9	kJ/m <sup>2</sup>	ISO 180/1A
Unnotched Izod Impact			
23°C	460	J/m	ASTM D4812
23°C <sup>10</sup>	26	kJ/m <sup>2</sup>	ISO 180/1U
Multi-Axial Instrumented Impact Energy	1.20	J	ISO 6603-2
<b>Thermal</b>	<b>Nominal Value</b>	<b>Unit</b>	<b>Test Method</b>
Deflection Temperature Under Load			
0.45 MPa, Unannealed, 3.20 mm	143	°C	ASTM D648
0.45 MPa, Unannealed, 64.0 mm Span <sup>11</sup>	143	°C	ISO 75-2/Bf
1.8 MPa, Unannealed, 3.20 mm	140	°C	ASTM D648
1.8 MPa, Unannealed, 64.0 mm Span <sup>12</sup>	139	°C	ISO 75-2/Af
CLTE			ASTM D696
Flow : -30 to 30°C	1.0E-6	cm/cm/°C	
Transverse : -30 to 30°C	8.0E-6	cm/cm/°C	
<b>Injection</b>	<b>Nominal Value</b>	<b>Unit</b>	
Drying Temperature	121	°C	
Drying Time	4.0	hr	
Suggested Max Moisture	0.020	%	
Rear Temperature	293 to 304	°C	
Middle Temperature	310 to 321	°C	
Front Temperature	321 to 332	°C	
Processing (Melt) Temp	304 to 327	°C	
Mold Temperature	82.2 to 110	°C	
Back Pressure	0.172 to 0.344	MPa	
Screw Speed	30 to 60	rpm	
<b>NOTE</b>			
1.	50 mm/min		
2.	Type I, 5.0 mm/min		
3.	Type I, 5.0 mm/min		
4.	Type I, 5.0 mm/min		
5.	Type I, 5.0 mm/min		
6.	1.3 mm/min		
7.	2.0 mm/min		
8.	1.3 mm/min		
9.	80*10*4		

10.	80*10*4
11.	80*10*4 mm
12.	80*10*4 mm

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#### Recommended distributors for this material

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