

## LNP\* Thermocomp\* Compound 5C003

Americas: COMMERCIAL

Also known as: FP-VC-1003  
Product Reorder Name: 5C003

LNP THERMOCOMP\* 5C003 is a compound based on Polyvinylidene Fluoride resin containing Carbon Fiber. Added features of this material include: Electrically Conductive.

### Property

TYPICAL PROPERTIES <sup>(1)</sup>			
MECHANICAL	Value	Unit	Standard
Tensile Stress, break	78	MPa	ASTM D 638
Tensile Strain, break	0.8	%	ASTM D 638
Tensile Modulus, 50 mm/min	14270	MPa	ASTM D 638
Flexural Stress	127	MPa	ASTM D 790
Flexural Modulus	11790	MPa	ASTM D 790
Tensile Stress, break	67	MPa	ISO 527
Tensile Strain, break	0.6	%	ISO 527
Tensile Modulus, 1 mm/min	14500	MPa	ISO 527
Flexural Stress	147	MPa	ISO 178
Flexural Modulus	20920	MPa	ISO 178
IMPACT	Value	Unit	Standard
Izod Impact, unnotched, 23°C	202	J/m	ASTM D 4812
Izod Impact, notched, 23°C	58	J/m	ASTM D 256
Instrumented Impact Energy @ peak, 23°C	11	J	ASTM D 3763
Multiaxial Impact	3	J	ISO 6603
Izod Impact, unnotched 80*10*4 +23°C	14	kJ/m <sup>2</sup>	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	6	kJ/m <sup>2</sup>	ISO 180/1A
THERMAL	Value	Unit	Standard
HDT, 0.45 MPa, 3.2 mm, unannealed	165	°C	ASTM D 648
HDT, 1.82 MPa, 3.2mm, unannealed	159	°C	ASTM D 648
CTE, -40°C to 40°C, flow	3.13E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, xflow	8.62E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, flow	3.13E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	8.62E-05	1/°C	ISO 11359-2
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	165	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	156	°C	ISO 75/Af
PHYSICAL	Value	Unit	Standard
Density	1.769	g/cm <sup>3</sup>	ASTM D 792
Moisture Absorption, 50% RH, 24 hrs	0.03	%	ASTM D 570
Mold Shrinkage, flow, 24 hrs	0.3 - 0.5	%	ASTM D 955
Mold Shrinkage, xflow, 24 hrs	1 - 1.3	%	ASTM D 955
Mold Shrinkage, flow, 24 hrs	0.36	%	ISO 294
Mold Shrinkage, xflow, 24 hrs	1.16	%	ISO 294
Density	1.76	g/cm <sup>3</sup>	ISO 1183
Moisture Absorption (23°C / 50% RH)	0.04	%	ISO 62

Source GMD, last updated:10/01/2004

Parameter	Value	Unit
Injection Molding		
Drying Temperature	120 - 150	°C
Drying Time	4	hrs
Melt Temperature	220 - 230	°C
Front - Zone 3 Temperature	240 - 250	°C
Middle - Zone 2 Temperature	215 - 225	°C
Rear - Zone 1 Temperature	195 - 205	°C
Mold Temperature	65 - 95	°C
Back Pressure	0.2 - 0.3	MPa
Screw Speed	30 - 60	rpm

Source GMD, last updated:10/01/2004

THESE PROPERTY VALUES ARE NOT INTENDED FOR SPECIFICATION PURPOSES.

PLEASE CHECK WITH YOUR [\(LOCAL SALES OFFICE\)](#) FOR AVAILABILITY IN YOUR REGION

(1) Typical values only. Variations within normal tolerances are possible for various colors. All values are measured after at least 48 hours storage at 23°C/50% relative humidity. All properties, except the melt volume and melt flow rates, are measured on injection molded samples. All samples tested under ISO test standards are prepared according to ISO 294.

(2) Only typical data for selection purposes. Not to be used for part or tool design.

(3) This rating is not intended to reflect hazards presented by this or any other material under actual fire conditions.

(4) Internal measurements according to UL standards.

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