



LNP™ THERMOCOMP™ Compound 5C003

Americas: COMMERCIAL

Also known as: LNP™ THERMOCOMP™ Compound FP-VC-1003

Product reorder name: 5C003

LNP THERMOCOMP™ 5C003 is a compound based on Polyvinylidene Fluoride resin containing 15% Carbon Fiber. Added features of this material include: Electrically Conductive.

TYPICAL PROPERTIES ¹	TYPICAL VALUE	Unit	Standard
MECHANICAL			
Tensile Stress, break	800	kgf/cm ²	ASTM D 638
Tensile Strain, break	0.8	%	ASTM D 638
Tensile Modulus, 50 mm/min	145500	kgf/cm ²	ASTM D 638
Flexural Stress	1300	kgf/cm ²	ASTM D 790
Flexural Modulus	120200	kgf/cm ²	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			
Izod Impact, unnotched, 23°C	20	cm-kgf/cm	ASTM D 4812
Izod Impact, notched, 23°C	5	cm-kgf/cm	ASTM D 256
Instrumented Impact Energy @ peak, 23°C	116	cm-kgf	ASTM D 3763
Multiaxial Impact	30	cm-kgf	ISO 6603
Izod Impact, unnotched 80*10*4 +23°C	14	kJ/m ²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	6	kJ/m ²	ISO 180/1A
THERMAL			
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



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TYPICAL PROPERTIES ¹	TYPICAL VALUE	Unit	Standard
THERMAL			
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			
Density	1.769	g/cm ³	ASTM D 792
Moisture Absorption, 50% RH, 24 hrs	0.03	%	ASTM D 570
Mold Shrinkage, flow, 24 hrs (5)	0.3 - 0.5	%	ASTM D 955
Mold Shrinkage, xflow, 24 hrs (5)	1 - 1.3	%	ASTM D 955
Mold Shrinkage, flow, 24 hrs (5)	0.36	%	ISO 294
Mold Shrinkage, xflow, 24 hrs (5)	1.16	%	ISO 294
Density	1.76	g/cm ³	ISO 1183
Moisture Absorption (23°C / 50% RH)	0.04	%	ISO 62



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PROCESSING PARAMETERS	TYPICAL VALUE	Unit
Injection Molding		
Drying Temperature	120 - 150	°C
Drying Time	4	hrs
Melt Temperature	215 - 230	°C
Front - Zone 3 Temperature	225 - 245	°C
Middle - Zone 2 Temperature	210 - 225	°C
Rear - Zone 1 Temperature	190 - 210	°C
Mold Temperature	65 - 90	°C
Back Pressure	0.2 - 0.3	MPa
Screw Speed	30 - 60	rpm