

LNPTM THERMOCOMPTM COMPOUND 5C003

FP-VC-1003

DESCRIPTION

LNP THERMOCOMP 5C003 compound is based on Polyvinylidene Fluoride (PVDF) resin containing 15% carbon fiber. Added features of this grade include: Electrically Conductive.

GENERAL INFORMATION	
Features	Electrically Conductive, Carbon fiber filled, High stiffness/Strength
Fillers	Carbon Fiber
Polymer Types	Polyvinylidene Fluoride (PVDF)
Processing Techniques	Injection Molding
INDUSTRY	SUB INDUSTRY
Electrical and Electronics	Energy Management, Electronic Components
Industrial	Material Handling

TYPICAL PROPERTY VALUES

Revision 20231109

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL ⁽¹⁾			
Tensile Stress, break	78	MPa	ASTM D638
Tensile Strain, break	0.8	%	ASTM D638
Tensile Modulus, 5 mm/min	14270	MPa	ASTM D638
Flexural Stress	127	MPa	ASTM D790
Flexural Modulus	11790	MPa	ASTM D790
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 ⁽¹⁾			
Izod Impact, unnotched, 23°C	202	J/m	ASTM D4812
Izod Impact, notched, 23°C	58	J/m	ASTM D256
Instrumented Dart Impact Energy @ peak, 23°C	11	J	ASTM D3763
Multiaxial Impact	3	J	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 ⁽¹⁾			
HDT, 0.45 MPa, 3.2 mm, unannealed	165	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	159	°C	ASTM D648
CTE, -40°C to 40°C, flow	3.13E-05	1/°C	ASTM E831
CTE, -40°C to 40°C, xflow	8.62E-05	1/°C	ASTM E831

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
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 ⁽¹⁾			
Density	1.769	g/cm ³	ASTM D792
Moisture Absorption, (23°C/50% RH/24 hrs)	0.03	%	ASTM D570
Mold Shrinkage, flow, 24 hrs ⁽²⁾	0.3 – 0.5	%	ASTM D955
Mold Shrinkage, xflow, 24 hrs ⁽²⁾	1 – 1.3	%	ASTM D955
Mold Shrinkage, flow, 24 hrs ⁽²⁾	0.36	%	ISO 294
Mold Shrinkage, xflow, 24 hrs ⁽²⁾	1.16	%	ISO 294
Density	1.76	g/cm ³	ISO 1183
Moisture Absorption (23°C / 50% RH)	0.04	%	ISO 62
INJECTION MOLDING ⁽³⁾			
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	

- (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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