LNP™ THERMOCOMP™ COMPOUND 5C003

FP-VC-1003

DESCRIPTION

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

TYPICAL PROPERTY VALUES

Revision 20191216

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
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			
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/m²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	6	kJ/m²	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
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/cm³	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/cm³	ISO 1183

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Moisture Absorption (23°C / 50% RH)	0.04	%	ISO 62
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	

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