

SABIC Innovative Plastics LNP THERMOCOMP 5C003 FP-V (PVDF)

Category : Polymer , Thermoplastic , Fluoropolymer , PVDF

Material Notes:

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

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-LNP-THERMOCOMP-5C003-FP-V-PVDF.php

Physical Properties	Metric	English	Comments
Density	1.76 g/cc	0.0636 lb/in ³	ISO 1183
	1.769 g/cc	0.06391 lb/in ³	ASTM D792
Moisture Absorption	0.0300 %	0.0300 %	50% RH, 24 hrs; ASTM D570
	0.0400 %	0.0400 %	23 ^o C / 50% RH; ISO 62
Linear Mold Shrinkage, Flow	0.0036 cm/cm	0.0036 in/in	ISO 294
	@Time 86400 sec	@Time 24.0 hour	
	0.0030 - 0.0050 cm/cm	0.0030 - 0.0050 in/in	ASTM D955
	@Time 86400 sec	@Time 24.0 hour	
Linear Mold Shrinkage, Transverse	0.010 - 0.013 cm/cm	0.010 - 0.013 in/in	ASTM D955
	@Time 86400 sec	@Time 24.0 hour	
	0.0116 cm/cm	0.0116 in/in	ISO 294
	@Time 86400 sec	@Time 24.0 hour	

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	67.0 MPa	9720 psi	ISO 527
	78.0 MPa	11300 psi	ASTM D638
Elongation at Break	0.60 %	0.60 %	ISO 527
	0.80 %	0.80 %	ASTM D638
Tensile Modulus	14.27 GPa	2070 ksi	50 mm/min; ASTM D638
	14.5 GPa	2100 ksi	1 mm/min; ISO 527
Flexural Strength	127 MPa	18400 psi	ASTM D790
	147 MPa	21300 psi	ISO 178

Flexural Modulus Mechanical Properties	11.79 GPa Metric	1710 ksi English	ASTM D790 Comments
	20.92 GPa	3034 ksi	ISO 178
Izod Impact, Notched	0.580 J/cm	1.09 ft-lb/in	ASTM D256
Izod Impact, Unnotched	2.02 J/cm	3.78 ft-lb/in	ASTM D4812
Izod Impact, Notched (ISO)	6.00 kJ/m ²	2.86 ft-lb/in ²	80*10*4; ISO 180/1A
Izod Impact, Unnotched (ISO)	14.0 kJ/m ²	6.66 ft-lb/in ²	80*10*4; ISO 180/1U
Dart Drop, Total Energy	11.0 J	8.11 ft-lb	Instrumented Impact Energy @ peak; ASTM D3763
Impact Test	3.00 J	2.21 ft-lb	Multiaxial Impact; ISO 6603

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	31.3 Åµm/m-Å°C	17.4 Åµin/in-Å°F	ASTM E 831
	@Temperature -40.0 - 40.0 Å°C	@Temperature -40.0 - 104 Å°F	
	31.3 Åµm/m-Å°C	17.4 Åµin/in-Å°F	ISO 11359-2
	@Temperature -40.0 - 40.0 Å°C	@Temperature -40.0 - 104 Å°F	
CTE, linear, Transverse to Flow	86.2 Åµm/m-Å°C	47.9 Åµin/in-Å°F	ASTM E 831
	@Temperature -40.0 - 40.0 Å°C	@Temperature -40.0 - 104 Å°F	
	86.2 Åµm/m-Å°C	47.9 Åµin/in-Å°F	ISO 11359-2
	@Temperature -40.0 - 40.0 Å°C	@Temperature -40.0 - 104 Å°F	
Deflection Temperature at 0.46 MPa (66 psi)	165 Å°C	329 Å°F	Flatw 80*10*4 sp=64mm; ISO 75/Bf
	165 Å°C	329 Å°F	unannealed; ASTM D648
	@Thickness 3.20 mm	@Thickness 0.126 in	
Deflection Temperature at 1.8 MPa (264 psi)	156 Å°C	313 Å°F	Flatw 80*10*4 sp=64mm; ISO 75/Af
	159 Å°C	318 Å°F	unannealed; ASTM D648
	@Thickness 3.20 mm	@Thickness 0.126 in	

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