

SABIC Innovative Plastics LNP Thermocomp WC003P Polyester Elastomer

Category : Polymer , Thermoplastic , Elastomer, TPE , Polyester, TP , Polyester Thermoplastic Elastomer

Material Notes:

LNP* Thermocomp* WC003P is a compound based on Polyester resin containing Carbon Fiber. Added features of this material include:
Electrically Conductive. This data was supplied by SABIC-IP for the Americas region.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-LNP-Thermocomp-WC003P-Polyester-Elastomer.php

Physical Properties	Metric	English	Comments
Density	1.37 g/cc	0.0495 lb/in ³	ISO 1183
	1.38 g/cc	0.0499 lb/in ³	ASTM D 792
Moisture Absorption at Equilibrium	0.080 %	0.080 %	23 ^o C / 50% RH; ISO 62
	0.050 % @Time 86400 sec	0.050 % @Time 24.0 hour	50% RH; ASTM D 570
Linear Mold Shrinkage, Flow	0.0050 - 0.0070 cm/cm	0.0050 - 0.0070 in/in	SABIC Method
	0.0050 - 0.0070 cm/cm @Time 86400 sec	0.0050 - 0.0070 in/in @Time 24.0 hour	ASTM D 955
	0.0050 - 0.0070 cm/cm @Time 86400 sec	0.0050 - 0.0070 in/in @Time 24.0 hour	ISO 294
Linear Mold Shrinkage, Transverse	0.011 - 0.013 cm/cm	0.011 - 0.013 in/in	SABIC Method
	0.011 - 0.013 cm/cm @Time 86400 sec	0.011 - 0.013 in/in @Time 24.0 hour	ASTM D 955
	0.011 - 0.013 cm/cm @Time 86400 sec	0.011 - 0.013 in/in @Time 24.0 hour	ISO 294

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	104 MPa	15100 psi	ASTM D 638
	104 MPa	15100 psi	ISO 527
Elongation at Break	1.9 %	1.9 %	ISO 527
	2.0 %	2.0 %	ASTM D 638
Tensile Modulus	10.0 GPa	1450 ksi	1 mm/min; ISO 527
	10.47 GPa	1519 ksi	50 mm/min; ASTM D 638

Mechanical Properties	Metric	English	Comments
Flexural Strength	157 MPa	22800 psi	ASTM D 790
	157 MPa	22800 psi	ISO 178
Flexural Modulus	8.68 GPa	1260 ksi	ASTM D 790
	9.03 GPa	1310 ksi	ISO 178
Izod Impact, Notched	0.320 J/cm @Temperature 23.0 Â°C	0.599 ft-lb/in @Temperature 73.4 Â°F	ASTM D 256
Izod Impact, Unnotched	4.80 J/cm @Temperature 23.0 Â°C	8.99 ft-lb/in @Temperature 73.4 Â°F	ASTM D 4812
Izod Impact, Notched (ISO)	3.00 kJ/mÂ² @Temperature 23.0 Â°C	1.43 ft-lb/inÂ² @Temperature 73.4 Â°F	80*10*4; ISO 180/1A
Izod Impact, Unnotched (ISO)	29.0 kJ/mÂ² @Temperature 23.0 Â°C	13.8 ft-lb/inÂ² @Temperature 73.4 Â°F	80*10*4; ISO 180/1U
Impact Test	1.00 J	0.738 ft-lb	Multiaxial Impact; ISO 6603
	7.00 J @Temperature 23.0 Â°C	5.16 ft-lb @Temperature 73.4 Â°F	Instrumented Impact Energy @ peak; ASTM D 3763

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	24.7 Âµm/m-Â°C @Temperature -40.0 - 40.0 Â°C	13.7 Âµin/in-Â°F @Temperature -40.0 - 104 Â°F	ISO 11359-2
	25.2 Âµm/m-Â°C @Temperature -40.0 - 40.0 Â°C	14.0 Âµin/in-Â°F @Temperature -40.0 - 104 Â°F	ASTM E 831
CTE, linear, Transverse to Flow	74.7 Âµm/m-Â°C @Temperature -40.0 - 40.0 Â°C	41.5 Âµin/in-Â°F @Temperature -40.0 - 104 Â°F	ISO 11359-2
	75.6 Âµm/m-Â°C @Temperature -40.0 - 40.0 Â°C	42.0 Âµin/in-Â°F @Temperature -40.0 - 104 Â°F	ASTM E 831
Deflection Temperature at 1.8 MPa (264 psi)	183 Â°C	361 Â°F	Flatw 80*10*4 sp=64mm; ISO 75/ Af

Thermal Properties	Metric	English	Comments
	@Thickness 3.20 mm	@Thickness 0.126 in	unannealed; ASTM D 648

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