

SABIC Innovative Plastics LNP Thermocomp PF00A PA 6 (Europe-Africa-Middle East)

Category : Polymer , Thermoplastic , Nylon , Nylon 6 , Nylon 6 , 50% Glass Fiber Filled

Material Notes:

50% glass fibre reinforced Polyamide 6 injection moulding resin. This data was supplied by SABIC-IP for the Europe-Africa-Middle East region.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-LNP-Thermocomp-PF00A-PA-6-Europe-Africa-Middle-East.php

Physical Properties	Metric	English	Comments
Density	1.55 g/cc	0.0560 lb/in ³	ISO 1183
Moisture Absorption at Equilibrium	0.60 %	0.60 %	23 ^o C / 50% RH; ISO 62
Water Absorption at Saturation	4.5 % @Temperature 23.0 ^o C	4.5 % @Temperature 73.4 ^o F	ISO 62
Linear Mold Shrinkage, Flow	0.0010 - 0.0020 cm/cm	0.0010 - 0.0020 in/in	on tensile bar; SABIC Method
Linear Mold Shrinkage, Transverse	0.0080 - 0.011 cm/cm	0.0080 - 0.011 in/in	on tensile bar; SABIC Method

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	122	122	ISO 2039-2
Tensile Strength at Break	224 MPa	32500 psi	5 mm/min; ISO 527
Elongation at Break	3.2 %	3.2 %	5 mm/min; ISO 527
Tensile Modulus	14.0 GPa	2030 ksi	1 mm/min; ISO 527
Flexural Strength	320 MPa	46400 psi	2 mm/min; ISO 178
Flexural Modulus	13.25 GPa	1922 ksi	2 mm/min; ISO 178
Izod Impact, Notched (ISO)	14.0 kJ/m ² @Temperature -40.0 ^o C	6.66 ft-lb/in ² @Temperature -40.0 ^o F	80*10*4; ISO 180/1A
	15.0 kJ/m ² @Temperature -30.0 ^o C	7.14 ft-lb/in ² @Temperature -22.0 ^o F	80*10*4; ISO 180/1A
	16.0 kJ/m ² @Temperature -20.0 ^o C	7.61 ft-lb/in ² @Temperature -4.00 ^o F	80*10*4; ISO 180/1A

Mechanical Properties	Metric	English	Comments
	18.0 kJ/m ² @Temperature 23.0 °C	lb/in ² @Temperature 73.4 °F	80*10*4, ISO 180/1A
Izod Impact, Unnotched (ISO)	90.0 kJ/m ² @Temperature 23.0 °C	42.8 ft-lb/in ² @Temperature 73.4 °F	80*10*4; ISO 180/1U
	90.0 kJ/m ² @Temperature -30.0 °C	42.8 ft-lb/in ² @Temperature -22.0 °F	80*10*4; ISO 180/1U
Charpy Impact Unnotched	10.0 J/cm ² @Temperature 23.0 °C	47.6 ft-lb/in ² @Temperature 73.4 °F	Edgew 80*10*4 sp=62mm; ISO 179/1eU
	10.0 J/cm ² @Temperature -30.0 °C	47.6 ft-lb/in ² @Temperature -22.0 °F	Edgew 80*10*4 sp=62mm; ISO 179/1eU
Charpy Impact, Notched	1.50 J/cm ² @Temperature -30.0 °C	7.14 ft-lb/in ² @Temperature -22.0 °F	V-notch Edgew 80*10*4 sp=62mm; ISO 179/1eA
	1.80 J/cm ² @Temperature 23.0 °C	8.57 ft-lb/in ² @Temperature 73.4 °F	V-notch Edgew 80*10*4 sp=62mm; ISO 179/1eA

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	12.0 μm/m-°C @Temperature 23.0 - 60.0 °C	6.67 μin/in-°F @Temperature 73.4 - 140 °F	ISO 11359-2
CTE, linear, Transverse to Flow	83.0 μm/m-°C @Temperature 23.0 - 60.0 °C	46.1 μin/in-°F @Temperature 73.4 - 140 °F	ISO 11359-2
Deflection Temperature at 0.46 MPa (66 psi)	220 °C	428 °F	Edgew 120*10*4 sp=100mm; ISO 75/Be
Deflection Temperature at 1.8 MPa (264 psi)	212 °C	414 °F	Edgew 120*10*4 sp=100mm; ISO 75/Ae
Vicat Softening Point	215 °C	419 °F	Rate B/120; ISO 306
	218 °C	424 °F	Rate B/50; ISO 306
Flammability, UL94	HB @Thickness 0.750 mm	HB @Thickness 0.0295 in	UL 94 by SABIC-IP

Oxygen Index Thermal Properties	25 % Metric	25 % English	LOI: ISO 4589 Comments
Glow Wire Test	650 Å°C @Thickness 2.00 mm	1200 Å°F @Thickness 0.0787 in	Glow Wire Flammability Index; IEC 60695-2-12

Electrical Properties	Metric	English	Comments
Volume Resistivity	>= 1.00e+16 ohm-cm	>= 1.00e+16 ohm-cm	IEC 60093
Surface Resistance	>= 1.00e+16 ohm	>= 1.00e+16 ohm	ROA; IEC 60093
Dielectric Constant	3.4 @Frequency 1.00e+6 Hz	3.4 @Frequency 1.00e+6 Hz	IEC 60250
	3.6 @Frequency 50.0 - 60.0 Hz	3.6 @Frequency 50.0 - 60.0 Hz	IEC 60250
Dielectric Strength	20.0 kV/mm @Thickness 3.20 mm	508 kV/in @Thickness 0.126 in	in oil; IEC 60243-1
	0.0061 @Frequency 50.0 - 60.0 Hz	0.0061 @Frequency 50.0 - 60.0 Hz	IEC 60250
Comparative Tracking Index	0.016 @Frequency 1.00e+6 Hz	0.016 @Frequency 1.00e+6 Hz	IEC 60250
	>= 350 V	>= 350 V	IEC 60112
	500 V	500 V	IEC 60112

Descriptive Properties	Value	Comments
Ball Pressure Test, 125Å°C +/- 2Å°C	PASSES	IEC 60695-10-2

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