

SABIC Innovative Plastics LNP KONDUIT PX11311 PA 6 (Asia Pacific)

Category : Polymer , Thermoplastic , Nylon , Nylon 6

Material Notes:

Thermally conductive mineral filled PA6 FR compound

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-LNP-KONDUIT-PX11311-PA-6-Asia-Pacific.php

Physical Properties	Metric	English	Comments
Density	1.74 g/cc	0.0629 lb/in ³	ASTM D792
Water Absorption	0.25 %	0.25 %	SABIC Method
	@Time 86400 sec	@Time 24.0 hour	
Moisture Absorption	0.0400 %	0.0400 %	23°C / 50% RH; ISO 62
Linear Mold Shrinkage, Flow	0.0033 cm/cm	0.0033 in/in	ASTM D955
	@Time 86400 sec	@Time 24.0 hour	
Linear Mold Shrinkage, Transverse	0.0048 cm/cm	0.0048 in/in	ASTM D955
	@Time 86400 sec	@Time 24.0 hour	
Melt Index of Compound	49 g/10 min	49 g/10 min	MVR [cm ³ /10 min]; ISO 1133
	@Load 10.0 kg, Temperature 300 °C	@Load 22.0 lb, Temperature 572 °F	

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	52.0 MPa	7540 psi	Type I, 5 mm/min; ASTM D638
Elongation at Break	2.0 %	2.0 %	Type I, 5 mm/min; ASTM D638
Tensile Modulus	7.24 GPa	1050 ksi	5 mm/min; ASTM D638
Flexural Strength	76.0 MPa	11000 psi	1.3 mm/min, 50 mm span; ASTM D790
Flexural Modulus	9.04 GPa	1310 ksi	1.3 mm/min, 50 mm span; ASTM D790
Izod Impact, Notched	0.430 J/cm	0.806 ft-lb/in	ASTM D256
Izod Impact, Unnotched	1.83 J/cm	3.43 ft-lb/in	ASTM D4812
Izod Impact, Unnotched (ISO)	5.30 - 18.2 kJ/m ²	2.52 - 8.66 ft-lb/in ²	ISO R179

Thermal Properties	Metric	English	Comments
	19.4 µm/m-°C	10.8 µin/in-°F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	@Temperature 40.0 - 120 °C	@Temperature 104 - 248 °F	ASTM E 831
	31.3 µm/m-°C	17.4 µin/in-°F	ASTM E 831
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	ASTM E 831
CTE, linear, Transverse to Flow	45.9 µm/m-°C	25.5 µin/in-°F	ASTM E 831
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	ASTM E 831
	69.5 µm/m-°C	38.6 µin/in-°F	ASTM E 831
	@Temperature 40.0 - 120 °C	@Temperature 104 - 248 °F	ASTM E 831
Specific Heat Capacity	1.42 J/g-°C	0.339 BTU/lb-°F	ASTM C351
Thermal Conductivity	0.990 W/m-K	6.87 BTU-in/hr-ft ² -°F	through-plane, ø80*3mm discs; ISO 22007-2
	1.20 W/m-K	8.33 BTU-in/hr-ft ² -°F	through-plane, 10*10*3mm sample; ASTM E 1461-07
	1.38 W/m-K	9.58 BTU-in/hr-ft ² -°F	in-plane, ø80*3mm discs; ISO 22007-2
	2.10 W/m-K	14.6 BTU-in/hr-ft ² -°F	in-plane, ø25*0.4mm disc; ASTM E 1461-07
Deflection Temperature at 1.8 MPa (264 psi)	199 °C	390 °F	unannealed; ASTM D648
	@Thickness 6.40 mm	@Thickness 0.252 in	
Flammability, UL94	V-0	V-0	UL 94
	@Thickness 1.00 mm	@Thickness 0.0394 in	
Glow Wire Test	775 °C	1430 °F	IEC 60695-2-13
	850 °C	1560 °F	IEC 60695-2-13
	960 °C	1760 °F	IEC 60695-2-12
	@Thickness 1.00 - 3.00 mm	@Thickness 0.0394 - 0.118 in	IEC 60695-2-12

Electrical Properties	Metric	English	Comments
Surface Resistance	>= 1.00e+15 ohm	>= 1.00e+15 ohm	ASTM D257
Dielectric Constant	4.74	4.74	ASTM ES 7-83
	@Frequency 1.00e+9 Hz	@Frequency 1.00e+9 Hz	
Dielectric Strength	>= 10.0 kV/mm	>= 254 kV/in	in oil; ASTM D149

Electrical Properties	@Thickness 1.00 mm Metric	@Thickness 0.0394 in English	Comments
Dissipation Factor	0.0077 @Frequency 1.10e+9 Hz	0.0077 @Frequency 1.10e+9 Hz	ASTM ES 7-83
Comparative Tracking Index	600 V	600 V	IEC 60112
Hot Wire Ignition, HWI	>= 120 sec	>= 120 sec	UL 746A
High Amp Arc Ignition, HAI	>= 120 arcs	>= 120 arcs	UL 746A

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