

SABIC Innovative Plastics LNP KONDUIT PX08321 PA 6

Category : Polymer , Thermoplastic , Nylon , Nylon 6

Material Notes:

LNP* Konduit* PX08321 a compound based on PA6 resins containing mineral. Added features include: Thermally Conductive.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-LNP-KONDUIT-PX08321-PA-6.php

Physical Properties	Metric	English	Comments
Density	1.61 g/cc	0.0582 lb/in ³	ASTM D792
Water Absorption	0.34 %	0.34 %	SABIC Method
	@Time 86400 sec	@Time 24.0 hour	
Moisture Absorption	0.0600 %	0.0600 %	23°C / 50% RH; ISO 62
Linear Mold Shrinkage, Flow	0.0046 cm/cm	0.0046 in/in	ASTM D955
	@Time 86400 sec	@Time 24.0 hour	
Linear Mold Shrinkage, Transverse	0.0039 cm/cm	0.0039 in/in	ASTM D955
	@Time 86400 sec	@Time 24.0 hour	
Melt Flow	12.2 g/10 min	12.2 g/10 min	ASTM D1238
	@Load 6.70 kg, Temperature 285 °C	@Load 14.8 lb, Temperature 545 °F	

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	70.0 MPa	10200 psi	Type I, 5 mm/min; ASTM D638
Elongation at Break	0.90 %	0.90 %	Type I, 5 mm/min; ASTM D638
Tensile Modulus	13.82 GPa	2004 ksi	50 mm/min; ASTM D638
Flexural Strength	104 MPa	15100 psi	1.3 mm/min, 50 mm span; ASTM D790
Flexural Modulus	14.2 GPa	2060 ksi	1.3 mm/min, 50 mm span; ASTM D790
Izod Impact, Notched	0.240 J/cm	0.450 ft-lb/in	ASTM D256
Izod Impact, Unnotched	1.57 J/cm	2.94 ft-lb/in	ASTM D4812

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	16.3 µm/m-°C	9.06 µin/in-°F	ASTM E 831
	@Temperature -40.0 -	@Temperature -40.0 -	

Thermal Properties	40.0 °C Metric	104 °F English	Comments
	36.3 µm/m-°C	20.2 µin/in-°F	
	@Temperature 40.0 - 120 °C	@Temperature 104 - 248 °F	ASTM E 831
CTE, linear, Transverse to Flow	28.2 µm/m-°C	15.7 µin/in-°F	
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	ASTM E 831
	55.6 µm/m-°C	30.9 µin/in-°F	
	@Temperature 40.0 - 120 °C	@Temperature 104 - 248 °F	ASTM E 831
Thermal Conductivity	1.10 W/m-K	7.63 BTU-in/hr-ft ² -°F	through-plane, ø80*3mm discs; ISO 22007-2
	2.60 W/m-K	18.0 BTU-in/hr-ft ² -°F	through-plane, 10*10*3mm sample; ASTM E 1461-07
	8.57 W/m-K	59.5 BTU-in/hr-ft ² -°F	in-plane, ø80*3mm discs; ISO 22007-2
	10.0 W/m-K	69.4 BTU-in/hr-ft ² -°F	in-plane, ø25*0.4mm disc; ASTM E 1461-07
Deflection Temperature at 1.8 MPa (264 psi)	192 °C	378 °F	
	@Thickness 3.20 mm	@Thickness 0.126 in	unannealed; ASTM D648
Flammability, UL94	HB	HB	
	@Thickness 1.00 mm	@Thickness 0.0394 in	UL 94
Glow Wire Test	825 °C	1520 °F	IEC 60695-2-13
	960 °C	1760 °F	IEC 60695-2-12
	@Thickness 1.00 mm	@Thickness 0.0394 in	

Electrical Properties	Metric	English	Comments
Dielectric Constant	4.1	4.1	
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	ASTM D150
	6.2	6.2	
	@Frequency 50.0 - 60.0 Hz	@Frequency 50.0 - 60.0 Hz	ASTM D150
Dielectric Strength	14.7 kV/mm	373 kV/in	
	@Thickness 1.00 mm	@Thickness 0.0394 in	in oil; ASTM D149
Dissipation Factor	0.044	0.044	
			ASTM D150

Electrical Properties	@Frequency 1.00e+6 Metric Hz	@Frequency 1.00e+6 English Hz	Comments
	0.076	0.076	ASTM D150
	@Frequency 50.0 - 60.0 Hz	@Frequency 50.0 - 60.0 Hz	
Comparative Tracking Index	600 V	600 V	IEC 60112
Hot Wire Ignition, HWI	30 - 60 sec	30 - 60 sec	UL 746A
High Amp Arc Ignition, HAI	>= 120 arcs	>= 120 arcs	UL 746A

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