

SABIC Innovative Plastics LNP KONDUIT PX08322 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-PX08322-PA-6-Asia-Pacific.php

Physical Properties	Metric	English	Comments
Density	1.52 g/cc	0.0549 lb/in ³	ASTM D792
Water Absorption	0.39 % @Time 86400 sec	0.39 % @Time 24.0 hour	SABIC Method
Moisture Absorption	0.0600 %	0.0600 %	23°C / 50% RH; ISO 62
Linear Mold Shrinkage, Flow	0.0050 cm/cm @Time 86400 sec	0.0050 in/in @Time 24.0 hour	ASTM D955
Linear Mold Shrinkage, Transverse	0.0045 cm/cm @Time 86400 sec	0.0045 in/in @Time 24.0 hour	ASTM D955
Melt Flow	15.3 g/10 min @Load 6.70 kg, Temperature 285 °C	15.3 g/10 min @Load 14.8 lb, Temperature 545 °F	ASTM D1238

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	54.0 MPa	7830 psi	Type I, 5 mm/min; ASTM D638
Elongation at Break	0.70 %	0.70 %	Type I, 5 mm/min; ASTM D638
Tensile Modulus	11.79 GPa	1710 ksi	50 mm/min; ASTM D638
Flexural Strength	82.0 MPa	11900 psi	1.3 mm/min, 50 mm span; ASTM D790
Flexural Modulus	11.7 GPa	1700 ksi	1.3 mm/min, 50 mm span; ASTM D790
Izod Impact, Notched	0.170 J/cm	0.318 ft-lb/in	ASTM D256
Izod Impact, Unnotched	0.880 J/cm	1.65 ft-lb/in	ASTM D4812

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	21.5 µm/m-°C @Temperature -40.0 -	11.9 µin/in-°F @Temperature -40.0 -	ASTM E 831

Thermal Properties	40.0 °C Metric	104 °F English	Comments
	27.1 µm/m-°C	15.1 µin/in-°F	
	@Temperature 40.0 - 120 °C	@Temperature 104 - 248 °F	ASTM E 831
CTE, linear, Transverse to Flow	35.4 µm/m-°C	19.7 µin/in-°F	
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	ASTM E 831
	58.3 µm/m-°C	32.4 µin/in-°F	
	@Temperature 40.0 - 120 °C	@Temperature 104 - 248 °F	ASTM E 831
Thermal Conductivity	0.920 W/m-K	6.38 BTU-in/hr-ft ² -°F	through-plane, ø80*3mm discs; ISO 22007-2
	2.10 W/m-K	14.6 BTU-in/hr-ft ² -°F	through-plane, 10*10*3mm sample; ASTM E 1461-07
	5.09 W/m-K	35.3 BTU-in/hr-ft ² -°F	in-plane, ø80*3mm discs; ISO 22007-2
	8.10 W/m-K	56.2 BTU-in/hr-ft ² -°F	in-plane, ø25*0.4mm disc; ASTM E 1461-07
Deflection Temperature at 1.8 MPa (264 psi)	180 °C	356 °F	
	@Thickness 6.40 mm	@Thickness 0.252 in	unannealed; ASTM D648
Flammability, UL94	V-0	V-0	
	@Thickness 1.20 mm	@Thickness 0.0472 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
Surface Resistance	>= 1.00e+15 ohm	>= 1.00e+15 ohm	ASTM D257
Dielectric Constant	4.8	4.8	
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	ASTM D150
	7.27	7.27	
	@Frequency 50.0 - 60.0 Hz	@Frequency 50.0 - 60.0 Hz	ASTM D150
Dielectric Strength	14.1 kV/mm	358 kV/in	
	@Thickness 1.00 mm	@Thickness 0.0394 in	in oil; ASTM D149

Electrical Properties Dissipation Factor	0.043 Metric	0.043 English	Comments ASTM D150
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	0.083	0.083	ASTM D150
	@Frequency 50.0 - 60.0 Hz	@Frequency 50.0 - 60.0 Hz	
Comparative Tracking Index	575 V	575 V	IEC 60112
Hot Wire Ignition, HWI	>= 120 sec	>= 120 sec	UL 746A
High Amp Arc Ignition, HAI	>= 120 arcs	>= 120 arcs	UL 746A

Descriptive Properties	Value	Comments
Water Immersion, Start F1 from 1mm onward	PASSES	UL 746C
	PASSES	UL 746C

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