LNP™ KONDUIT™ COMPOUND PX11311

PX11311
REGION ASIA

DESCRIPTION

LNP KONDUIT PX11311 is a compound based on PA6 resin containing mineral and glass fiber. Added features include thermally conductive, electrically isolative and non-brominated, non-chlorinated FR.

TYPICAL PROPERTY VALUES

Revision 20200204

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, brk, Type I, 5 mm/min	52	MPa	ASTM D 638
Tensile Strain, brk, Type I, 5 mm/min	2	%	ASTM D 638
Tensile Modulus, 5 mm/min	7240	MPa	ASTM D 638
Flexural Stress, brk, 1.3 mm/min, 50 mm span	76	MPa	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	9040	MPa	ASTM D 790
Impact Strength	5.3 – 18.2	kJ/m²	ISO R179
IMPACT			
Izod Impact, unnotched, 23°C	183	J/m	ASTM D 4812
Izod Impact, notched, 23°C	43	J/m	ASTM D 256
THERMAL			
HDT, 1.82 MPa, 6.4 mm, unannealed	199	°C	ASTM D 648
CTE, -40°C to 40°C, flow	3.13E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, xflow	4.59E-05	1/°C	ASTM E 831
CTE, 40°C to 120°C, flow	1.94E-05	1/°C	ASTM E 831
CTE, 40°C to 120°C, xflow	6.95E-05	1/°C	ASTM E 831
Specific Heat	1.42	J/g-°C	ASTM C 351
Thermal Conductivity through-plane, 10*10*3mm sample	1.2	W/m-K	ASTM E 1461-07
Thermal Conductivity in-plane, ?25*0.4mm disc	2.1	W/m-K	ASTM E 1461-07
Thermal Conductivity through-plane, ?80*3mm discs	0.99	W/m-K	ISO 22007-2
Thermal Conductivity in-plane, ?80*3mm discs	1.38	W/m-K	ISO 22007-2
Relative Temp Index, Elec [1]	65	°C	UL 746B
Relative Temp Index, Mech w/impact [1]	65	°C	UL 746B
Relative Temp Index, Mech w/o impact [1]	65	°C	UL 746B
PHYSICAL			
Density	1.74	g/cm³	ASTM D 792
Mold Shrinkage, flow, 24 hrs	0.33	%	ASTM D 955
Mold Shrinkage, xflow, 24 hrs	0.48	%	ASTM D 955
Water Absorption, 23°C/24hrs	0.25	%	SABIC method
Moisture Absorption (23°C / 50% RH)	0.04	%	ISO 62
Melt Volume Rate, MVR at 300°C/10.0 kg	49	cm³/10 min	ISO 1133
ELECTRICAL			
Surface Resistivity	>1.E+15	Ohm	ASTM D 257
Dielectric Strength, in oil, 1.0 mm	>10	kV/mm	ASTM D 149

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Dielectric Constant (Dk), 1.1 GHz	4.74	-	ASTM ES 7-83
Dissipation Factor (Df), 1.1 GHz	0.0077	-	ASTM ES 7-83
Comparative Tracking Index [2]	600	V	IEC 60112
Comparative Tracking Index (UL) {PLC}	0	PLC Code	UL 746A
Hot-Wire Ignition (HWI), PLC 0	≥3	mm	UL 746A
Hot-Wire Ignition (HWI), PLC 2	≥1	mm	UL 746A
High Amp Arc Ignition (HAI), PLC 0	≥1	mm	UL 746A
FLAME CHARACTERISTICS [1]			
UL Yellow Card Link	E207780-101041511	-	-
UL Recognized, 94V-0 Flame Class Rating	≥1	mm	UL 94
Glow Wire Ignitability Temperature, 1.0 mm	775	°C	IEC 60695-2-13
Glow Wire Ignitability Temperature, 3.0 mm	850	°C	IEC 60695-2-13
Glow Wire Flammability Index, 3.0 mm	960	°C	IEC 60695-2-12
Glow Wire Flammability Index, 1.0 mm	960	°C	IEC 60695-2-12
INJECTION MOLDING			
Drying Temperature	80	°C	
Drying Time	4	hrs	
Maximum Moisture Content	0.15 – 0.25	%	
Melt Temperature	270 – 295	°C	
Front - Zone 3 Temperature	270 – 290	°C	
Middle - Zone 2 Temperature	270 – 290	°C	
Rear - Zone 1 Temperature	260 – 275	°C	
Mold Temperature	85 – 100	°C	
Back Pressure	0.2 – 0.3	MPa	
Screw Speed	20 – 60	rpm	

(1) UL Ratings shown on the technical datasheet might not cover the full range of thicknesses and colors. For details, please see the UL Yellow Card.

(2) Value shown here is based on internal measurement.

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