

# LNP™ KONDUIT™ COMPOUND PX13012

## DESCRIPTION

LNP KONDUIT PX13012 is a compound based on PA6 resin containing mineral. Added features include thermally conductive, electrically isolative and non-brominated, non-chlorinated FR.

## TYPICAL PROPERTY VALUES

Revision 20200204

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
<b>MECHANICAL</b>			
Tensile Stress, yld, Type I, 5 mm/min	68	MPa	ASTM D 638
Tensile Strain, brk, Type I, 5 mm/min	1.2	%	ASTM D 638
Tensile Modulus, 5 mm/min	10350	MPa	ASTM D 638
Flexural Stress, brk, 1.3 mm/min, 50 mm span	119	MPa	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	11800	MPa	ASTM D 790
Tensile Stress, break, 5 mm/min	75	MPa	ISO 527
Tensile Strain, break, 5 mm/min	1.1	%	ISO 527
Tensile Modulus, 1 mm/min	13000	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	105	MPa	ISO 178
Flexural Modulus, 2 mm/min	12000	MPa	ISO 178
<b>IMPACT</b>			
Izod Impact, unnotched, 23°C	152	J/m	ASTM D 4812
Izod Impact, notched, 23°C	15	J/m	ASTM D 256
Izod Impact, unnotched 80*10*4 +23°C	9	kJ/m <sup>2</sup>	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	3	kJ/m <sup>2</sup>	ISO 180/1A
<b>THERMAL</b>			
HDT, 0.45 MPa, 3.2 mm	203	°C	ASTM D 648
HDT, 1.82 MPa, 3.2mm, unannealed	137	°C	ASTM D 648
CTE, -40°C to 40°C, flow	3.3E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, xflow	4.4E-05	1/°C	ASTM E 831
Thermal Conductivity through-plane, 60*60*3mm plaque	1.2	W/m-K	ISO 22007-2
Thermal Conductivity in-plane, 60*60*3mm plaque	5.5	W/m-K	ISO 22007-2
CTE, -30°C to 80°C, flow	3.9E-05	1/°C	ISO 11359-2
CTE, -30°C to 80°C, xflow	5.5E-05	1/°C	ISO 11359-2
Ball Pressure Test, 165°C +/- 2°C	PASSES	-	IEC 60695-10-2
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	203	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	160	°C	ISO 75/Af
Relative Temp Index, Elec <sup>(1)</sup>	130	°C	UL 746B
Relative Temp Index, Mech w/impact <sup>(1)</sup>	100	°C	UL 746B
Relative Temp Index, Mech w/o impact <sup>(1)</sup>	130	°C	UL 746B
<b>PHYSICAL</b>			
Mold Shrinkage on Tensile Bar, flow	0.7	%	SABIC method
Mold Shrinkage, flow, 24 hrs	0.55	%	ASTM D 955
Mold Shrinkage, xflow, 24 hrs	0.65	%	ASTM D 955
Mold Shrinkage, flow, 24 hrs	0.55	%	ISO 294

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Mold Shrinkage, xflow, 24 hrs	0.65	%	ISO 294
Density	1.68	g/cm <sup>3</sup>	ISO 1183
Water Absorption, 23°C/24hrs	0.23	%	ISO 62-1
<b>ELECTRICAL</b>			
Surface Resistivity	4.E+14	Ohm	ASTM D 257
Dielectric Strength, in oil, 1.6 mm	7.2	kV/mm	ASTM D 149
Dielectric Strength, 1.6 mm	6.1	kV/mm	IEC 60243-1
Comparative Tracking Index (UL) {PLC}	0	PLC Code	UL 746A
Comparative Tracking Index <sup>(2)</sup>	600	V	IEC 60112
Hot-Wire Ignition (HWI), PLC 0	≥0.8	mm	UL 746A
High Amp Arc Ignition (HAI), PLC 0	≥0.8	mm	UL 746A
<b>FLAME CHARACTERISTICS <sup>(1)</sup></b>			
UL Yellow Card Link	<a href="#">E45329-101769086</a>	-	-
UL Recognized, 94V-0 Flame Class Rating	≥0.8	mm	UL 94
Glow Wire Ignitability Temperature, 0.8 mm	750	°C	IEC 60695-2-13
Glow Wire Ignitability Temperature, 1.6 mm	775	°C	IEC 60695-2-13
Glow Wire Ignitability Temperature, 3.0 mm	800	°C	IEC 60695-2-13
Glow Wire Flammability Index, 0.8 mm	960	°C	IEC 60695-2-12
Glow Wire Flammability Index, 1.6 mm	960	°C	IEC 60695-2-12
Glow Wire Flammability Index, 3.0 mm	960	°C	IEC 60695-2-12
<b>INJECTION MOLDING</b>			
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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