

LNPTM KONDUITTM COMPOUND PX11313

PX11313
REGION ASIA

DESCRIPTION

LNP KONDUIT PX11313 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	98	MPa	ASTM D 638
Tensile Strain, brk, Type I, 5 mm/min	1.3	%	ASTM D 638
Tensile Modulus, 5 mm/min	13280	MPa	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	167	MPa	ASTM D 790
Flexural Stress, brk, 1.3 mm/min, 50 mm span	176	MPa	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	12500	MPa	ASTM D 790
Tensile Stress, break, 5 mm/min	108	MPa	ISO 527
Tensile Strain, break, 5 mm/min	1.3	%	ISO 527
Tensile Modulus, 1 mm/min	13250	MPa	ISO 527
Flexural Stress, break, 2 mm/min	186	MPa	ISO 178
Flexural Modulus, 2 mm/min	13000	MPa	ISO 178
Impact Strength	2.4 – 27	kJ/m ²	ISO R179
IMPACT			
Izod Impact, unnotched, 23°C	326	J/m	ASTM D 4812
Izod Impact, notched, 23°C	30	J/m	ASTM D 256
Izod Impact, unnotched 80*10*4 +23°C	23	kJ/m ²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	3	kJ/m ²	ISO 180/1A
THERMAL			
HDT, 0.45 MPa, 3.2 mm	227	°C	ASTM D 648
HDT, 1.82 MPa, 6.4 mm, unannealed	215	°C	ASTM D 648
CTE, 40°C to 120°C, flow	4.05E-05	1/°C	ASTM E 831
CTE, 40°C to 120°C, xflow	8.54E-05	1/°C	ASTM E 831
Thermal Conductivity through-plane, 10*10*3mm sample	1.4	W/m-K	ASTM E 1461-07
Thermal Conductivity in-plane, ?25*0.4mm disc	1.8	W/m-K	ASTM E 1461-07
Thermal Conductivity through-plane, ?80*3mm discs	0.9	W/m-K	ISO 22007-2
Thermal Conductivity in-plane, ?80*3mm discs	1.9	W/m-K	ISO 22007-2
Ball Pressure Test, 125°C +/- 2°C	PASSES	-	IEC 60695-10-2
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	228	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	208	°C	ISO 75/Af
Relative Temp Index, Elec ⁽¹⁾	130	°C	UL 746B
Relative Temp Index, Mech w/impact ⁽¹⁾	105	°C	UL 746B
Relative Temp Index, Mech w/o impact ⁽¹⁾	140	°C	UL 746B
PHYSICAL			

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Density	1.79	g/cm ³	ASTM D 792
Mold Shrinkage, flow, 24 hrs	0.42	%	ASTM D 955
Mold Shrinkage, xflow, 24 hrs	0.58	%	ASTM D 955
Water Absorption, 23°C/24hrs	0.04	%	ISO 62-1
Water Absorption, 23°C/24hrs	0.23	%	SABIC method
Moisture Absorption (23°C / 50% RH)	0.04	%	ISO 62
ELECTRICAL			
Surface Resistivity	>1.E+15	Ohm	ASTM D 257
Dielectric Strength, in oil, 1.0 mm	>10	kV/mm	ASTM D 149
Dielectric Constant (Dk), 1.1 GHz	4.84	-	ASTM ES 7-83
Dissipation Factor (Df), 1.1 GHz	0.0099	-	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
Hot-Wire Ignition (HWI), PLC 3	≥0.8	mm	UL 746A
High Amp Arc Ignition (HAI), PLC 0	≥0.8	mm	UL 746A
FLAME CHARACTERISTICS ⁽¹⁾			
UL Yellow Card Link	E207780-101282911	-	-
UL Recognized, 94V-0 Flame Class Rating	≥0.8	mm	UL 94
UV-light, water exposure/immersion	F2	-	UL 746C
Glow Wire Ignitability Temperature, 1.0 mm	750	°C	IEC 60695-2-13
Glow Wire Ignitability Temperature, 3.0 mm	800	°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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