LNP™ KONDUIT™ Compound PX10323

REGION EUROPE

DESCRIPTION

LNP KONDUIT PX10323 compound is based on Nylon 6 resin containing glass fiber and proprietary thermal filler. Added features of this grade include: Thermally Conductive.

GENERAL INFORMATION	
Features	Electrically Conductive, Thermally Conductive, No PFAS intentionally added
Fillers	Proprietary Filler, Glass Fiber (Total fluorine >50ppm only from inorganic fluorine)
Polymer Types	Polyamide 6 (Nylon 6)
Processing Techniques	Injection Molding

INDUSTRY	SUB INDUSTRY
Building and Construction	Building Component
Consumer	Home Appliances
Electrical and Electronics	Mobile Phone - Computer - Tablets, Lighting
Industrial	Electrical, Material Handling

TYPICAL PROPERTY VALUES

Revision 20260420

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Stress, brk, Type I, 5 mm/min	70	MPa	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	0.9	%	ASTM D638
Tensile Modulus, 5 mm/min	13700	MPa	ASTM D638
Flexural Stress, brk, 1.3 mm/min, 50 mm span	95	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	14200	MPa	ASTM D790
Tensile Stress, break, 5 mm/min	73	MPa	ISO 527
Tensile Strain, break, 5 mm/min	0.8	%	ISO 527
Tensile Modulus, 1 mm/min	14000	MPa	ISO 527
Flexural Stress, break, 2 mm/min	96	MPa	ISO 178
Flexural Modulus, 2 mm/min	14300	MPa	ISO 178
IMPACT [1]			
Izod Impact, unnotched, 23°C	73	J/m	ASTM D4812
Izod Impact, notched, 23°C	30	J/m	ASTM D256
Izod Impact, unnotched 80*10*4 +23°C	6	kJ/m²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	3	kJ/m²	ISO 180/1A
THERMAL [1]			
HDT, 1.82 MPa, 3.2mm, unannealed	186	°C	ASTM D648
CTE			
-40°C to 40°C, flow	1.61E-05	1/°C	ASTM E831
-40°C to 40°C, xflow	3.56E-05	1/°C	ASTM E831

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
-30°C to 80°C, flow	1.4E-05	1/°C	ISO 11359-2
-30°C to 80°C, xflow	3.95E-05	1/°C	ISO 11359-2
23°C to 80°C, flow	1.62E-05	1/°C	ISO 11359-2
23°C to 80°C, xflow	4.77E-05	1/°C	ISO 11359-2
Thermal Conductivity in-plane, 25*0.4mm disc	15	W/m-K	ASTM E1461-07
Thermal Conductivity through-plane, 10*10*3mm sample	3.5	W/m-K	ASTM E1461-07
Thermal Conductivity in-plane, 60*60*3mm plaque	18	W/m-K	ISO 22007-2
Thermal Conductivity through-plane, 60*60*3mm plaque	1.5	W/m-K	ISO 22007-2
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	201	°C	ISO 75/Af
Ball Pressure Test			
165°C +/- 2°C	PASSES	-	IEC 60695-10-2
approximate maximum	205	°C	IEC 60695-10-2
PHYSICAL [1]			
Density	1.61	g/cm³	ASTM D792
Mold Shrinkage, flow, 24 hrs [2]	0.2	%	ASTM D955
Mold Shrinkage, xflow, 24 hrs [2]	0.22	%	ASTM D955
Density	1.61	g/cm³	ISO 1183
ELECTRICAL [1]			
Surface Resistivity	1.05E+06	Ω	ASTM D257
FLAME CHARACTERISTICS [3]			
UL Yellow Card Link	E45329-104457424	-	-
UL Recognized, 94HB Flame Class Rating	≥0.75	mm	UL 94
Glow Wire Flammability Index, 1.0 mm	960	°C	IEC 60695-2-12
Glow Wire Flammability Index, 1.5 mm	960	°C	IEC 60695-2-12
Glow Wire Flammability Index, 3.0 mm	960	°C	IEC 60695-2-12
Glow Wire Ignitability Temperature, 1.0 mm	825	°C	IEC 60695-2-13
Glow Wire Ignitability Temperature, 1.5 mm	850	°C	IEC 60695-2-13
Glow Wire Ignitability Temperature, 3.0 mm	960	°C	IEC 60695-2-13
INJECTION MOLDING [4]			
Drying Temperature	80 – 90	°C	
Drying Time	3 – 4	Hrs	
Melt Temperature	270 – 300	°C	
Nozzle Temperature	270 – 300	°C	
Front - Zone 3 Temperature	270 – 300	°C	
Middle - Zone 2 Temperature	270 – 300	°C	
Rear - Zone 1 Temperature	260 – 290	°C	
Mold Temperature	80 – 100	°C	
Back Pressure	3 – 9	MPa	
Screw Speed	30 – 150	rpm	

(1) The information stated on Technical Datasheets should be used as indicative only for material selection purposes and not be utilized as specification or used for part or tool design.

(2) Measurements made from laboratory test coupon. Actual shrinkage may vary outside of range due to differences in processing conditions, equipment, part geometry and tool design. It is recommended that mold shrinkage studies be performed with surrogate or legacy tooling prior to cutting tools for new molded article.

(3) 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.

(4) Injection Molding parameters are only mentioned as general guidelines. These may not apply or may need adjustment in specific situations such as low shot sizes, large part molding, thin wall molding and gas-assist molding.

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