LNP™ KONDUIT™ Compound OX10324

DESCRIPTION

LNP KONDUIT OX10324 compound is based on Polyphenylene Sulfide (PPS) resin containing glass fiber and proprietary thermal filler. Added features of this grade include: Thermally Conductive and Non-Brominated, Non-Chlorinated Flame Retardant.

GENERAL INFORMATION	
Features	Flame Retardant, Electrically Conductive, Thermally Conductive, Non Cl/Br flame retardant, No PFAS intentionally added
Fillers	Proprietary Filler, Glass Fiber (Total fluorine >50ppm only from inorganic fluorine)
Polymer Types	Polyphenylene Sulfide, Linear (PPS, Linear)
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	49	MPa	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	0.6	%	ASTM D638
Tensile Modulus, 5 mm/min	13500	MPa	ASTM D638
Flexural Stress, brk, 1.3 mm/min, 50 mm span	75	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	15600	MPa	ASTM D790
Tensile Stress, break, 5 mm/min	53	MPa	ISO 527
Tensile Strain, break, 5 mm/min	0.6	%	ISO 527
Tensile Modulus, 1 mm/min	14000	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	73	MPa	ISO 178
Flexural Modulus, 2 mm/min	13500	MPa	ISO 178
IMPACT [1]			
Izod Impact, unnotched, 23°C	70	J/m	ASTM D4812
Izod Impact, notched, 23°C	24	J/m	ASTM D256
Izod Impact, unnotched 80*10*4 +23°C	7	kJ/m²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	3	kJ/m²	ISO 180/1A
THERMAL [1]			
HDT, 0.45 MPa, 3.2 mm	275	°C	ASTM D648
HDT, 1.82 MPa, 6.4 mm, unannealed	258	°C	ASTM D648
CTE, -40°C to 40°C, flow	1.32E-05	1/°C	ASTM E831
CTE, -40°C to 40°C, xflow	2.5E-05	1/°C	ASTM E831

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Thermal Conductivity through-plane, 60*60*3mm plaque	1.3	W/m-K	ISO 22007-2
Thermal Conductivity in-plane, 60*60*3mm plaque	18	W/m-K	ISO 22007-2
Thermal Conductivity through-plane, 10*10*3mm sample	3.5	W/m-K	ASTM E1461-07
Thermal Conductivity in-plane, 25*0.4mm disc	15	W/m-K	ASTM E1461-07
CTE, -30°C to 80°C, flow	1.3E-05	1/°C	ISO 11359-2
CTE, -30°C to 80°C, xflow	2.39E-05	1/°C	ISO 11359-2
CTE, 23°C to 80°C, flow	1.38E-05	1/°C	ISO 11359-2
CTE, 23°C to 80°C, xflow	2.44E-05	1/°C	ISO 11359-2
Ball Pressure Test			
165°C +/- 2°C	PASSES	-	IEC 60695-10-2
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	231	°C	ISO 75/Af
Relative Temp Index, Elec [2]	130	°C	UL 746B
Relative Temp Index, Mech w/impact [2]	130	°C	UL 746B
Relative Temp Index, Mech w/o impact [2]	130	°C	UL 746B
PHYSICAL [1]			
Mold Shrinkage, flow, 24 hrs [3]	0.1 – 0.2	%	ISO 294
Mold Shrinkage, xflow, 24 hrs [3]	0.1 – 0.3	%	ISO 294
Density	1.75	g/cm³	ISO 1183
Water Absorption, (23°C/24hrs)	0.01	%	ISO 62-1
Water Absorption, 23°C/24hrs	0.01	%	SABIC method
ELECTRICAL [1]			
Surface Resistivity	>2.5E+04	Ω	ASTM D257
Comparative Tracking Index (UL) {PLC}	4	PLC Code	UL 746A
Hot-Wire Ignition (HWI), PLC 0	≥1.2	mm	UL 746A
FLAME CHARACTERISTICS [2]			
UL Yellow Card Link	E121562-101344589	-	-
UL Yellow Card Link 2	E207780-100960980	-	-
UL Recognized, 94V-0 Flame Class Rating	≥1.2	mm	UL 94
Glow Wire Ignitability Temperature, 1.0 mm [4]	850	°C	IEC 60695-2-13
UV-light, water exposure/immersion	F1	-	UL 746C
INJECTION MOLDING [5]			
Drying Temperature	120 – 150	°C	
Drying Time	4	Hrs	
Melt Temperature	320 – 350	°C	
Front - Zone 3 Temperature	315 – 345	°C	
Middle - Zone 2 Temperature	315 – 345	°C	
Rear - Zone 1 Temperature	315 – 345	°C	
Mold Temperature	110 – 150	°C	
Back Pressure	0.3 – 0.7	MPa	
Screw Speed	60 – 100	rpm	
Shot to Cylinder Size	50 – 75	%	

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(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) 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.
(3) 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.
(4) Value shown here is based on internal measurement.
(5) 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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