LNP™ KONDUIT™ COMPOUND OX11314

REGION ASIA

DESCRIPTION

LNP KONDUIT OX11314 compound is based on Polyphenylene Sulfide (PPS) resin containing mineral and glass fiber. Added features of this grade include: Thermally Conductive, Electrically Insulative and Non-Brominated, Non-Chlorinated Flame Retardant.

GENERAL INFORMATION	
Features	Flame Retardant, Thermally Conductive, Non Cl/Br flame retardant, Thermally conductive/Electrically isolative, No PFAS intentionally added
Fillers	Glass Fiber, Mineral
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 20250124

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Stress, brk, Type I, 5 mm/min	44	MPa	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	0.6	%	ASTM D638
Tensile Modulus, 5 mm/min	12160	MPa	ASTM D638
Flexural Stress, brk, 1.3 mm/min, 50 mm span	47	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	11200	MPa	ASTM D790
IMPACT [1]			
Charpy Impact, unnotched, 23°C	5	kJ/m²	ISO 179/2C
Izod Impact, unnotched, 23°C	90	J/m	ASTM D4812
Izod Impact, notched, 23°C	25	J/m	ASTM D256
Charpy Impact, notched, 23°C	2	kJ/m²	ISO 179/2C
THERMAL [1]			
HDT, 1.82 MPa, 6.4 mm, unannealed	191	°C	ASTM D648
CTE, 40°C to 120°C, flow	2.6E-05	1/°C	ASTM E831
CTE, 40°C to 120°C, xflow	5.1E-05	1/°C	ASTM E831
Specific Heat	1.44	J/g-°C	ASTM C351
Thermal Conductivity through-plane, 10*10*3mm sample	1	W/m-K	ASTM E1461-07
Thermal Conductivity in-plane, 25*0.4mm disc	2.1	W/m-K	ASTM E1461-07
Thermal Conductivity through-plane, ?80*3mm discs	0.90	W/m-K	ISO 22007-2
Thermal Conductivity in-plane, ?80*3mm discs	2.22	W/m-K	ISO 22007-2

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
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]			
Density	1.9	g/cm³	ASTM D792
Mold Shrinkage, flow, 24 hrs [3]	0.18	%	ASTM D955
Mold Shrinkage, xflow, 24 hrs [3]	0.24	%	ASTM D955
Water Absorption, 23°C/24hrs	0.1	%	SABIC method
Moisture Absorption (23°C / 50% RH)	0.03	%	ISO 62
ELECTRICAL [1]			
Surface Resistivity	>1.E+15	Ω	ASTM D257
Dielectric Strength, in oil, 1.0 mm	>4	kV/mm	ASTM D149
Comparative Tracking Index [4]	600	V	IEC 60112
Comparative Tracking Index (UL) {PLC}	0	PLC Code	UL 746A
Hot-Wire Ignition (HWI), PLC 0	≥0.8	mm	UL 746A
High Amp Arc Ignition (HAI), PLC 0	≥1	mm	UL 746A
High Amp Arc Ignition (HAI), PLC 1	≥0.8	mm	UL 746A
FLAME CHARACTERISTICS [1]			
UL Yellow Card Link	E207780-101043961	-	-
UL Recognized, 94V-0 Flame Class Rating	≥0.8	mm	UL 94
Glow Wire Ignitability Temperature, 1.0 mm	875	°C	IEC 60695-2-13
Glow Wire Ignitability Temperature, 3.0 mm	960	°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 [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	%	

(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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