LNP™ KONDUIT™ COMPOUND OX24315

DESCRIPTION

LNP KONDUIT OX24315 compound is a thermally conductive PPS compound. Typical features include thermal conductivity, insulation, high heat resistance and good dimensional stability.

GENERAL INFORMATION	
Features	Thermally conductive/Electrically isolative, No PFAS intentionally added
Polymer Types	Polyphenylene Sulfide, Linear (PPS, Linear)
Processing Techniques	Injection Molding

INDUSTRY	SUB INDUSTRY
Electrical and Electronics	Energy Management

TYPICAL PROPERTY VALUES

Revision 20241030

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Stress, brk, Type I, 5 mm/min	57	MPa	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	0.5	%	ASTM D638
Tensile Modulus, 5 mm/min	14500	MPa	ASTM D638
Flexural Strength, 1.3 mm/min, 50 mm span	83	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	16000	MPa	ASTM D790
Tensile Stress, break, 5 mm/min	57	MPa	ISO 527
Tensile Strain, break, 5 mm/min	0.6	%	ISO 527
Tensile Modulus, 1 mm/min	15200	MPa	ISO 527
Flexural Strength, 2 mm/min	82	MPa	ISO 178
Flexural Modulus, 2 mm/min	17000	MPa	ISO 178
IMPACT [1]			
Izod Impact, notched, 23°C	15	J/m	ASTM D256
Izod Impact, unnotched, 23°C	68	J/m	ASTM D4812
Izod Impact, notched 80*10*4 +23°C	2.7	kJ/m²	ISO 180/1A
Izod Impact, unnotched 80*10*4 +23°C	5.8	kJ/m²	ISO 180/1U
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	1.2	kJ/m²	ISO 179/1eA
Charpy -30°C, V-notch Edgew 80*10*4 sp=62mm	1.2	kJ/m²	ISO 179/1eA
Charpy 23°C, Unnotch Edgew 80*10*4 sp=62mm	4.7	kJ/m²	ISO 179/1eU
Charpy -30°C, Unnotch Edgew 80*10*4 sp=62mm	4.2	kJ/m²	ISO 179/1eU
Instrumented Dart Impact Total Energy, 23°C	4.5	J	ASTM D3763
Instrumented Dart Impact Energy @ peak, 23°C	2.7	J	ASTM D3763
Multiaxial Impact	3.7	J	ISO 6603
THERMAL [1]			
HDT, 0.45 MPa, 3.2 mm, unannealed	272	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	224	°C	ASTM D648

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	275	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	228	°C	ISO 75/Af
Vicat Softening Temp, Rate B/50	246	°C	ISO 306
Vicat Softening Temp, Rate B/120	243	°C	ISO 306
Thermal Conductivity through-plane, 10*10*3mm sample	2	W/m-K	ASTM E1461-07
Thermal Conductivity in-plane, 25*0.4mm disc	8	W/m-K	ASTM E1461-07
PHYSICAL (1)			
Specific Gravity	1.72	-	ASTM D792
Density	1.72	g/cm³	ASTM D792
Water Absorption, (23°C/24hrs)	0.01	%	ISO 62-1
Mold Shrinkage, flow (2)	0.4 – 0.5	%	SABIC method
Mold Shrinkage, xflow (2)	0.5 – 0.6	%	SABIC method
ELECTRICAL (1)			
Surface Resistivity	1E+16	Ω	ASTM D257
Volume Resistivity	1E+16	Ω.cm	ASTM D257
INJECTION MOLDING (3)			
Drying Temperature	120 – 140	°C	
Drying Time	3 – 4	Hrs	
Melt Temperature	300 – 340	°C	
Nozzle Temperature	310 – 340	°C	
Front - Zone 3 Temperature	310 – 330	°C	
Middle - Zone 2 Temperature	310 – 330	°C	
Rear - Zone 1 Temperature	310 – 330	°C	
Mold Temperature	140 – 160	°C	
Screw Speed	60 – 100	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) 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.

DISCLAIMER