LNP™ KONDUIT™ COMPOUND DTK22

EXKD1306

DESCRIPTION

LNP KONDUIT DTK22 is a compound based on Polycarbonate resin containing mineral. Added features include thermally conductive and electrically isolative.

TYPICAL PROPERTY VALUES

Revision 20200204

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, brk, Type I, 5 mm/min	41	MPa	ASTM D 638
Tensile Strain, brk, Type I, 5 mm/min	5	%	ASTM D 638
Tensile Modulus, 5 mm/min	3830	MPa	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	79	MPa	ASTM D 790
Flexural Stress, brk, 1.3 mm/min, 50 mm span	77	MPa	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	3160	MPa	ASTM D 790
Tensile Stress, break, 5 mm/min	42	MPa	ISO 527
Tensile Strain, break, 5 mm/min	4.1	%	ISO 527
Tensile Modulus, 1 mm/min	3880	MPa	ISO 527
Flexural Stress, break, 2 mm/min	81	MPa	ISO 178
Flexural Modulus, 2 mm/min	4180	MPa	ISO 178
Impact Strength	13 – 48	kJ/m²	ISO R179
IMPACT			
Izod Impact, unnotched, 23°C	700	J/m	ASTM D 4812
Izod Impact, notched, 23°C	150	J/m	ASTM D 256
Izod Impact, unnotched 80*10*4 +23°C	41	kJ/m²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	13	kJ/m²	ISO 180/1A
THERMAL			
HDT, 0.45 MPa, 3.2 mm	127	°C	ASTM D 648
HDT, 1.82 MPa, 6.4 mm, unannealed	121	°C	ASTM D 648
CTE, 40°C to 120°C, flow	5.3E-05	1/°C	ASTM E 831
CTE, 40°C to 120°C, xflow	8.5E-05	1/°C	ASTM E 831
Thermal Conductivity through-plane, 60*60*3mm plaque	0.3	W/m-K	ISO 22007-2
Thermal Conductivity in-plane, 60*60*3mm plaque	1.3	W/m-K	ISO 22007-2
Thermal Conductivity through-plane, 10*10*3mm sample	0.6	W/m-K	ASTM E 1461-07
Thermal Conductivity in-plane, ?25*0.4mm disc	2	W/m-K	ASTM E 1461-07
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	128	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	119	°C	ISO 75/Af
Relative Temp Index, Elec [1]	80	°C	UL 746B
Relative Temp Index, Mech w/impact [1]	80	°C	UL 746B
Relative Temp Index, Mech w/o impact [1]	80	°C	UL 746B
PHYSICAL			
Density	1.46	g/cm³	ASTM D 792
Mold Shrinkage, flow, 24 hrs	0.41	%	ASTM D 955

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Mold Shrinkage, xflow, 24 hrs	0.39	%	ASTM D 955
Moisture Absorption (23°C / 50% RH)	0.03	%	ISO 62
ELECTRICAL			
Dielectric Constant (Dk), 1.1 GHz	3.66	-	ASTM ES 7-83
Dissipation Factor (Df), 1.1 GHz	0.0094	-	ASTM ES 7-83
FLAME CHARACTERISTICS (1)			
UL Yellow Card Link	E207780-102451424	-	-
UL Recognized, 94HB Flame Class Rating	≥0.5	mm	UL 94
Glow Wire Flammability Index, 0.8 mm	850	°C	IEC 60695-2-12
Glow Wire Flammability Index, 1.0 mm	875	°C	IEC 60695-2-12
Glow Wire Ignitability Temperature, 0.8 mm	850	°C	IEC 60695-2-13
Glow Wire Ignitability Temperature, 1.0 mm	850	°C	IEC 60695-2-13
INJECTION MOLDING			
Drying Temperature	120	°C	
Drying Time	2 – 4	hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	260 – 300	°C	
Nozzle Temperature	260 – 290	°C	
Front - Zone 3 Temperature	260 – 290	°C	
Middle - Zone 2 Temperature	260 – 290	°C	
Rear - Zone 1 Temperature	250 – 280	°C	
Hopper Temperature	60 – 80	°C	
Mold Temperature	80 – 120	°C	

(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.

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