

# LNP<sup>TM</sup> KONDUIT<sup>TM</sup> 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 20200521

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
<b>MECHANICAL</b>			
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/m <sup>2</sup>	ISO R179
<b>IMPACT</b>			
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/m <sup>2</sup>	ISO 180/1U
Izod Impact, notched 80°10°4 +23°C	13	kJ/m <sup>2</sup>	ISO 180/1A
<b>THERMAL</b>			
HDT, 0.45 MPa, 3.2 mm	127	°C	ASTM D 648
HDT, 1.82 MPa, 3.2 mm	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, 725°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 <sup>(1)</sup>	80	°C	UL 746B
Relative Temp Index, Mech w/impact <sup>(1)</sup>	80	°C	UL 746B
Relative Temp Index, Mech w/o impact <sup>(1)</sup>	80	°C	UL 746B
<b>PHYSICAL</b>			
Density	1.46	g/cm <sup>3</sup>	ASTM D 792
Mold Shrinkage, flow, 24 hrs	0.41	%	ASTM D 955

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
<b>ELECTRICAL</b>			
Dielectric Constant (Dk), 1.1 GHz	3.66	-	ASTM ES 7-83
Dissipation Factor (Df), 1.1 GHz	0.0094	-	ASTM ES 7-83
<b>FLAME CHARACTERISTICS <sup>(1)</sup></b>			
UL Yellow Card Link	<a href="#">E207780-102451424</a>	-	-
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
<b>INJECTION MOLDING</b>			
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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