LNP™ THERMOCOMP™ COMPOUND DF00A1P

DESCRIPTION

LNP* Thermocomp* DF00AIP is a compound based on Polycarbonate resin containing Glass Fiber, Flame Retardant. Added features of this material include: High Modulus, low warpage, Non-Brominated & Non-Chlorinated Flame Retardant.

TYPICAL PROPERTY VALUES

Revision 20191218

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, brk, Type I, 5 mm/min	170	MPa	ASTM D 638
Tensile Strain, brk, Type I, 5 mm/min	1.4	%	ASTM D 638
Tensile Modulus, 5 mm/min	17000	MPa	ASTM D 638
Flexural Stress, brk, 1.3 mm/min, 50 mm span	171	MPa	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	14470	MPa	ASTM D 790
Tensile Stress, break	126	MPa	ISO 527
Tensile Strain, break	1.4	%	ISO 527
Tensile Modulus, 1 mm/min	17400	MPa	ISO 527
Flexural Stress	168	MPa	ISO 178
Flexural Modulus	14180	MPa	ISO 178
IMPACT			
Izod Impact, unnotched, 23°C	181	J/m	ASTM D 4812
Izod Impact, notched, 23°C	80	J/m	ASTM D 256
Instrumented Impact Energy @ peak, 23°C	7	J	ASTM D 3763
Multiaxial Impact	7	J	ISO 6603
Izod Impact, unnotched 80*10*4 +23°C	13	kJ/m²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	7	kJ/m²	ISO 180/1A
THERMAL			
HDT, 0.45 MPa, 3.2 mm, unannealed	105	°C	ASTM D 648
HDT, 1.82 MPa, 3.2mm, unannealed	98	°C	ASTM D 648
CTE, -40°C to 40°C, flow	1.3E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, xflow	4.2E-05	1/°C	ASTM E 831
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	104	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	96	°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	1.68	g/cm³	ASTM D 792
Moisture Absorption, 50% RH, 24 hrs	0.3	%	ASTM D 570
Mold Shrinkage, flow, 24 hrs	0.1 – 0.25	%	ASTM D 955
Mold Shrinkage, xflow, 24 hrs	0.12 – 0.28	%	ASTM D 955
Melt Flow Rate, 300°C/2.16 kgf	21	g/10 min	ASTM D 1238
Melt Volume Rate, MVR at 300°C/2.16 kg	12	cm³/10 min	ISO 1133
FLAME CHARACTERISTICS (1)			

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
UL Yellow Card Link	E207780-101282786	-	-
UL Recognized, 94V-0 Flame Class Rating	≥0.8	mm	UL 94
INJECTION MOLDING			
Drying Temperature	110	°C	
Drying Time	3 – 6	hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	285 – 310	°C	
Nozzle Temperature	285 – 305	°C	
Front - Zone 3 Temperature	280 – 300	°C	
Middle - Zone 2 Temperature	270 – 290	°C	
Rear - Zone 1 Temperature	260 – 280	°C	
Mold Temperature	80 – 110	°C	
Back Pressure	0.1 – 0.3	MPa	
Screw Speed	50 – 90	rpm	

(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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