LNP™ THERMOCOMP™ COMPOUND DF005

DF-1005

DESCRIPTION

LNP THERMOCOMP DF005 is a compound based on Polycarbonate containing 25% Glass Fiber.

TYPICAL PROPERTY VALUES

Revision 20200108

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, yld, Type I, 5 mm/min	109	MPa	ASTM D 638
Tensile Stress, brk, Type I, 5 mm/min	108	MPa	ASTM D 638
Tensile Strain, yld, Type I, 5 mm/min	3	%	ASTM D 638
Tensile Strain, brk, Type I, 5 mm/min	3.4	%	ASTM D 638
Tensile Modulus, 50 mm/min	8330	MPa	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	180	MPa	ASTM D 790
Flexural Stress, brk, 1.3 mm/min, 50 mm span	180	MPa	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	7020	MPa	ASTM D 790
Tensile Stress, yield, 5 mm/min	109	MPa	ISO 527
Tensile Stress, break, 5 mm/min	107	MPa	ISO 527
Tensile Strain, yield, 5 mm/min	2.7	%	ISO 527
Tensile Strain, break, 5 mm/min	3.3	%	ISO 527
Tensile Modulus, 1 mm/min	7890	MPa	ISO 527
Flexural Stress	180	MPa	ISO 178
Flexural Modulus, 2 mm/min	6990	MPa	ISO 178
IMPACT			
Izod Impact, unnotched, 23°C	901	J/m	ASTM D 4812
Izod Impact, notched, 23°C	109	J/m	ASTM D 256
Multiaxial Impact	3	J	ISO 6603
Instrumented Impact Total Energy, 23°C	16	J	ASTM D 3763
Izod Impact, unnotched 80*10*4 +23°C	54	kJ/m²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	10	kJ/m²	ISO 180/1A
THERMAL			
HDT, 0.45 MPa, 3.2 mm, unannealed	144	°C	ASTM D 648
HDT, 1.82 MPa, 3.2mm, unannealed	141	°C	ASTM D 648
CTE, -30°C to 30°C, flow	2.E-06	1/°C	ASTM D 696
CTE, -30°C to 30°C, xflow	7.E-06	1/°C	ASTM D 696
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	145	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	141	°C	ISO 75/Af
Relative Temp Index, Elec [1]	125	°C	UL 746B
Relative Temp Index, Mech w/impact [1]	115	°C	UL 746B
Relative Temp Index, Mech w/o impact [1]	125	°C	UL 746B
PHYSICAL			
Specific Gravity	1.4	-	ASTM D 792

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Moisture Absorption, 50% RH, 24 hrs	0.14	%	ASTM D 570
Mold Shrinkage, flow, 24 hrs	0.2 – 0.5	%	ASTM D 955
Mold Shrinkage, xflow, 24 hrs	0.5 – 0.8	%	ASTM D 955
Moisture Absorption (23°C / 50% RH)	0.2	%	ISO 62
ELECTRICAL [1]			
High Voltage Arc Track Rate {PLC}	4	PLC Code	UL 746A
Hot-Wire Ignition (HWI), PLC 0	≥1.5	mm	UL 746A
High Amp Arc Ignition (HAI), PLC 2	≥3	mm	UL 746A
High Amp Arc Ignition (HAI), PLC 4	≥1.5	mm	UL 746A
FLAME CHARACTERISTICS [1]			
UL Yellow Card Link	E121562-101344533	-	-
UL Recognized, 94V-1 Flame Class Rating	≥3	mm	UL 94
UL Recognized, 94V-2 Flame Class Rating	≥1.5	mm	UL 94
INJECTION MOLDING			
Drying Temperature	120	°C	
Drying Time	4	hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	305 – 325	°C	
Front - Zone 3 Temperature	320 – 330	°C	
Middle - Zone 2 Temperature	310 – 320	°C	
Rear - Zone 1 Temperature	295 – 305	°C	
Mold Temperature	80 – 110	°C	
Back Pressure	0.2 – 0.3	MPa	
Screw Speed	30 – 60	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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