LNP™ THERMOCOMP™ COMPOUND DF003E

DF-1003 EM
REGION ASIA

DESCRIPTION

LNP THERMOCOMP DF003E is a compound based on Polycarbonate resin containing 15% Glass Fiber. Added features of this material include: Easy Molding.

TYPICAL PROPERTY VALUES

Revision 20191031

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, yield	82	MPa	ASTM D 638
Tensile Stress, break	77	MPa	ASTM D 638
Tensile Strain, yield	3.2	%	ASTM D 638
Tensile Strain, break	5	%	ASTM D 638
Tensile Modulus, 50 mm/min	4820	MPa	ASTM D 638
Flexural Modulus	4130	MPa	ASTM D 790
Tensile Stress, yield	82	MPa	ISO 527
Tensile Stress, break	78	MPa	ISO 527
Tensile Strain, yield	3.3	%	ISO 527
Tensile Strain, break	4.4	%	ISO 527
Tensile Modulus, 1 mm/min	4750	MPa	ISO 527
Flexural Stress	130	MPa	ISO 178
Flexural Modulus	4300	MPa	ISO 178
IMPACT			
Izod Impact, unnotched, 23°C	907	J/m	ASTM D 4812
Izod Impact, notched, 23°C	80	J/m	ASTM D 256
Instrumented Impact Energy @ peak, 23°C	20	J	ASTM D 3763
Multiaxial Impact	6	J	ISO 6603
Izod Impact, unnotched 80*10*4 +23°C	55	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	143	°C	ASTM D 648
HDT, 1.82 MPa, 3.2mm, unannealed	138	°C	ASTM D 648
CTE, -40°C to 40°C, flow	6.84E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, xflow	3.42E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, flow	6.8E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	3.5E-05	1/°C	ISO 11359-2
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	144	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	139	°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			

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Density	1.31	g/cm³	ASTM D 792
Moisture Absorption, 50% RH, 24 hrs	0.1	%	ASTM D 570
Mold Shrinkage, flow, 24 hrs	0.4 – 0.6	%	ASTM D 955
Mold Shrinkage, xflow, 24 hrs	0.5 – 0.7	%	ASTM D 955
Mold Shrinkage, flow, 24 hrs	0.54	%	ISO 294
Mold Shrinkage, xflow, 24 hrs	0.63	%	ISO 294
Density	1.31	g/cm³	ISO 1183
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	E207780-101343856	-	-
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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