LNP™ THERMOCOMP™ COMPOUND DF002FVQ

DESCRIPTION

LNP THERMOCOMP DF002FVQ compound is a 10% glass fiber reinforced Copolymer PC-based resin, UL94 V0@0.8mm and black LDS grade with good plate-ability and adhesion strength.

TYPICAL PROPERTY VALUES

Revision 20200318

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, brk, Type I, 5 mm/min	60	MPa	ASTM D 638
Tensile Strain, brk, Type I, 5 mm/min	3	%	ASTM D 638
Tensile Modulus, 5 mm/min	4610	MPa	ASTM D 638
Flexural Modulus, 1.3 mm/min, 50 mm span	4300	MPa	ASTM D 790
Flexural Strength, 1.3 mm/min, 50 mm span	115	MPa	ASTM D 790
Tensile Stress, break, 5 mm/min	60	MPa	ISO 527
Tensile Strain, break, 5 mm/min	3.5	%	ISO 527
Tensile Modulus, 1 mm/min	4625	MPa	ISO 527
Flexural Modulus, 2 mm/min	4100	MPa	ISO 178
Flexural Strength, 2 mm/min	110	MPa	ISO 178
IMPACT			
Izod Impact, notched, 23°C	100	J/m	ASTM D 256
Izod Impact, unnotched, 23°C	600	J/m	ASTM D 4812
Izod Impact, notched 80*10*4 +23°C	9	kJ/m²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	10	kJ/m²	ISO 179/1eA
Charpy 23°C, Unnotch Edgew 80*10*4 sp=62mm	42	kJ/m²	ISO 179/1eU
THERMAL			
HDT, 0.45 MPa, 3.2 mm, unannealed	126	°C	ASTM D 648
HDT, 1.82 MPa, 3.2mm, unannealed	120	°C	ASTM D 648
CTE, -40°C to 40°C, flow	3.5E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, xflow	6.5E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, flow	3.5E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	6.7E-05	1/°C	ISO 11359-2
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	1.35	g/cm³	ASTM D 792
Melt Flow Rate, 300°C/1.2 kgf	11	g/10 min	ASTM D 1238
Mold Shrinkage, flow	0.2 – 0.4	%	SABIC method
Mold Shrinkage, xflow	0.3 – 0.5	%	SABIC method
ELECTRICAL			
Dielectric Constant, 1.1 GHz	3.15	-	SABIC method
Dissipation Factor, 1.1 GHz	0.01	-	SABIC method
Dielectric Constant, 1.9 GHz	3.17	-	SABIC method

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Dissipation Factor, 1.9 GHz	0.01	-	SABIC method
Dielectric Constant, 5 GHz	3.15	-	SABIC method
Dissipation Factor, 5 GHz	0.01	-	SABIC method
Dielectric Constant, 10 GHz	3.17	-	SABIC method
Dissipation Factor, 10 GHz	0.01	-	SABIC method
Dielectric Constant, 20 GHz	3.04	-	SABIC method
Dissipation Factor, 20 GHz	0.01	-	SABIC method
FLAME CHARACTERISTICS (1)			
UL Yellow Card Link	E207780-103895096	-	-
UL Recognized, 94V-0 Flame Class Rating	0.8	mm	UL 94
INJECTION MOLDING			
Drying Temperature	110	°C	
Drying Time	3 – 4	hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	290 – 310	°C	
Nozzle Temperature	285 – 310	°C	
Front - Zone 3 Temperature	285 – 310	°C	
Middle - Zone 2 Temperature	285 – 310	°C	
Rear - Zone 1 Temperature	285 – 310	°C	
Mold Temperature	100 – 130	°C	
Back Pressure	0.1 – 0.3	MPa	
Screw Speed	50 – 150	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.

DISCLAIMER