LNP™ THERMOCOMP™ COMPOUND DF0041VI

DESCRIPTION

LNP THERMOCOMP DF0041VI compound is based on Polycarbonate (PC) resin containing 20% glass fiber. Added features of this grade include: Improved Plating Surface and Mechanical Performance targeted for Laser Direct Structuring (LDS) applications, Non-Brominated, Non-Chlorinated Flame Retardant, Wide Processing Window.

GENERAL INFORMATION	
Features	Flame Retardant, Dielectrics, Laser Direct Structuring, Non Cl/Br flame retardant, High stiffness/Strength
Fillers	Glass Fiber
Polymer Types	Polycarbonate (PC)
Processing Techniques	Injection Molding

INDUSTRY	SUB INDUSTRY
Building and Construction	Building Component
Consumer	Personal Accessory
Electrical and Electronics	Mobile Phone - Computer - Tablets
Industrial	Electrical

TYPICAL PROPERTY VALUES

Revision 20241021

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Stress, brk, Type I, 5 mm/min	85	MPa	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	2.5	%	ASTM D638
Tensile Modulus, 5 mm/min	7000	MPa	ASTM D638
Flexural Modulus, 1.3 mm/min, 50 mm span	6000	MPa	ASTM D790
Flexural Strength, 1.3 mm/min, 50 mm span	125	MPa	ASTM D790
Tensile Stress, break, 5 mm/min	86	MPa	ISO 527
Tensile Strain, break, 5 mm/min	2.5	%	ISO 527
Tensile Modulus, 1 mm/min	6900	MPa	ISO 527
Flexural Modulus, 2 mm/min	6400	MPa	ISO 178
Flexural Strength, 2 mm/min	130	MPa	ISO 178
IMPACT [1]			
Izod Impact, notched, 23°C	80	J/m	ASTM D256
Izod Impact, unnotched, 23°C	450	J/m	ASTM D4812
Izod Impact, notched 80*10*4 +23°C	8	kJ/m²	ISO 180/1A
Izod Impact, unnotched 80*10*4 +23°C	26	kJ/m²	ISO 180/1U
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	8	kJ/m²	ISO 179/1eA
Charpy 23°C, Unnotch Edgew 80*10*4 sp=62mm	30	kJ/m²	ISO 179/1eU
THERMAL [1]			
HDT, 0.45 MPa, 3.2 mm, unannealed	124	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	118	°C	ASTM D648

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
PHYSICAL [1]			
Density	1.4	g/cm³	ASTM D792
Melt Flow Rate, 300°C/2.16 kgf	17	g/10 min	ASTM D1238
Melt Flow Rate, 300°C/1.2 kgf	10	g/10 min	ASTM D1238
Mold Shrinkage, flow [2]	0.2 – 0.4	%	SABIC method
Mold Shrinkage, xflow [2]	0.2 – 0.4	%	SABIC method
ELECTRICAL [1]			
Dielectric Constant, 1.1 GHz	3.367	-	SABIC method
Dissipation Factor, 1.1 GHz	0.008	-	SABIC method
Dielectric Constant, 1.9 GHz	3.363	-	SABIC method
Dissipation Factor, 1.9 GHz	0.005	-	SABIC method
Dielectric Constant, 5 GHz	3.347	-	SABIC method
Dissipation Factor, 5 GHz	0.007	-	SABIC method
Dielectric Constant, 10 GHz	3.323	-	SABIC method
Dissipation Factor, 10 GHz	0.007	-	SABIC method
Dielectric Constant, 20 GHz	3.157	-	SABIC method
Dissipation Factor, 20 GHz	0.007	-	SABIC method
INJECTION MOLDING [3]			
Drying Temperature	110 – 120	°C	
Drying Time	3 – 4	Hrs	
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) The information stated on Technical Datasheets should be used as indicative only for material selection purposes and not be utilized as specification or used for part or tool design.

(2) Measurements made from laboratory test coupon. Actual shrinkage may vary outside of range due to differences in processing conditions, equipment, part geometry and tool design. It is recommended that mold shrinkage studies be performed with surrogate or legacy tooling prior to cutting tools for new molded article.

(3) Injection Molding parameters are only mentioned as general guidelines. These may not apply or may need adjustment in specific situations such as low shot sizes, large part molding, thin wall molding and gas-assist molding.

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