LNP™ THERMOCOMP™ COMPOUND DX13354X

DESCRIPTION

LNP THERMOCOMP DX13354X compound is based on Polycarbonate (PC) resin containing 30% glass fiber. Added features of this grade include: Improved Plating Surface and Mechanical Performance targeted for Laser Direct Structuring (LDS) applications, Improved Impact, Good Surface Aesthetics, Wide Processing Window and Colorable.

GENERAL INFORMATION	
Features	Dielectrics, Laser Direct Structuring, Aesthetics/Visual effects, Impact resistant, No PFAS intentionally added
Fillers	Glass Fiber
Polymer Types	Polycarbonate (PC)
Processing Techniques	Injection Molding

INDUSTRY	SUB INDUSTRY
Automotive	Automotive Interiors
Consumer	Personal Accessory
Electrical and Electronics	Mobile Phone - Computer - Tablets
Industrial	Electrical

TYPICAL PROPERTY VALUES

Revision 20231109

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Stress, brk, Type I, 5 mm/min	90	MPa	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	2.2	%	ASTM D638
Tensile Modulus, 5 mm/min	6900	MPa	ASTM D638
Flexural Strength, 1.3 mm/min, 50 mm span	130	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	6300	MPa	ASTM D790
Tensile Stress, break, 5 mm/min	90	MPa	ISO 527
Tensile Strain, break, 5 mm/min	2.1	%	ISO 527
Tensile Modulus, 1 mm/min	6600	MPa	ISO 527
Flexural Strength, 2 mm/min	130	MPa	ISO 178
Flexural Modulus, 2 mm/min	6400	MPa	ISO 178
IMPACT [1]			
Izod Impact, unnotched, 23°C	500	J/m	ASTM D4812
Izod Impact, notched, 23°C	90	J/m	ASTM D256
Izod Impact, unnotched 80*10*4 +23°C	32	kJ/m²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	9	kJ/m²	ISO 180/1A
Charpy Impact, unnotched, 23°C	36	kJ/m²	ISO 179/2C
Charpy Impact, notched, 23°C	9	kJ/m²	ISO 179/2C
THERMAL [1]			
HDT, 0.45 MPa, 3.2 mm	124	°C	ASTM D648
HDT, 1.82 MPa, 3.2 mm	120	°C	ASTM D648

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
CTE, -40°C to 40°C, flow	2.2E-05	1/°C	ASTM E831
CTE, -40°C to 40°C, xflow	6.3E-05	1/°C	ASTM E831
CTE, -40°C to 40°C, flow	1.9E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	6.1E-05	1/°C	ISO 11359-2
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	126	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	122	°C	ISO 75/Af
PHYSICAL (1)			
Specific Gravity	1.43	-	ASTM D792
Mold Shrinkage, flow, 3.2 mm (2)	0.1 – 0.3	%	SABIC method
Mold Shrinkage, xflow, 3.2 mm (2)	0.3 – 0.5	%	SABIC method
Melt Flow Rate, 280°C/2.16 kgf	12	g/10 min	ASTM D1238
Melt Flow Rate, 300°C/1.2 kgf	16	g/10 min	ASTM D1238
Melt Volume Rate, MVR at 300°C/1.2 kg	13	cm³/10 min	ASTM D1238
Density	1.43	g/cm³	ISO 1183
ELECTRICAL (1)			
Dielectric Constant, 1.1 GHz	3.47	-	SABIC method
Dielectric Constant, 1.9 GHz	3.45	-	SABIC method
Dielectric Constant, 5 GHz	3.45	-	SABIC method
Dissipation Factor, 1.1 GHz	0.013	-	SABIC method
Dissipation Factor, 1.9 GHz	0.012	-	SABIC method
Dissipation Factor, 5 GHz	0.011	-	SABIC method
INJECTION MOLDING (3)			
Drying Temperature	110	°C	
Drying Time	3 – 4	Hrs	
Melt Temperature	270 – 295	°C	
Nozzle Temperature	270 – 295	°C	
Front - Zone 3 Temperature	270 – 295	°C	
Middle - Zone 2 Temperature	270 – 295	°C	
Rear - Zone 1 Temperature	270 – 295	°C	
Mold Temperature	100 – 120	°C	

(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.

MORE INFORMATION

For curve data and CAE cards, please visit and register at https://materialfinder.sabic-specialties.com

DISCLAIMER