LNP™ THERMOCOMP™ COMPOUND D551

DESCRIPTION

LNP THERMOCOMP D551 compound is based on Polycarbonate (PC) resin containing 50% glass fiber. Added features of this grade include: High Modulus, Low Warpage, Good Ductility, Non-Brominated & Non-Chlorinated Flame Retardant.

GENERAL INFORMATION	
Features	Flame Retardant, Low Warpage, Non Cl/Br flame retardant, High stiffness/Strength, Impact resistant
Fillers	Glass Fiber
Brands	LNP™ THERMOCOMP™
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 20230607

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Stress, brk, Type I, 5 mm/min	154	MPa	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	2.1	%	ASTM D638
Tensile Modulus, 5 mm/min	15320	MPa	ASTM D638
Flexural Stress, brk, 1.3 mm/min, 50 mm span	223	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	13820	MPa	ASTM D790
Tensile Stress, break, 5 mm/min	153	MPa	ISO 527
Tensile Strain, break, 5 mm/min	1.9	%	ISO 527
Tensile Modulus, 1 mm/min	15130	MPa	ISO 527
IMPACT [1]			
Izod Impact, unnotched, 23°C	520	J/m	ASTM D4812
Izod Impact, notched, 23°C	127	J/m	ASTM D256
Instrumented Dart Impact Energy @ peak, 23°C	21	J	ASTM D3763
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	12	kJ/m²	ISO 179/1eA
Charpy 23°C, Unnotch Edgew 80*10*4 sp=62mm	38	kJ/m²	ISO 179/1eU
THERMAL [1]			
HDT, 1.82 MPa, 3.2mm, unannealed	107	°C	ASTM D648
CTE, -40°C to 40°C, flow	1.39E-05	1/°C	ASTM E831
CTE, -40°C to 40°C, xflow	4.15E-05	1/°C	ASTM E831
Relative Temp Index, Elec [2]	80	°C	UL 746B
Relative Temp Index, Mech w/impact [2]	80	°C	UL 746B

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Relative Temp Index, Mech w/o impact [2]	80	°C	UL 746B
PHYSICAL [1]			
Density	1.635	g/cm³	ASTM D792
Mold Shrinkage, flow, 24 hrs [3]	0.05 – 0.2	%	ASTM D955
Mold Shrinkage, xflow, 24 hrs [3]	0.05 – 0.2	%	ASTM D955
Melt Volume Rate, MVR at 300°C/2.16 kg	17	cm³/10 min	ASTM D1238
Melt Flow Rate, 300°C/5.0 kgf	48.6	g/10 min	ASTM D1238
Melt Volume Rate, MVR at 300°C/5.0 kg	29	cm³/10 min	ASTM D1238
ELECTRICAL [1]			
Volume Resistivity	2.15E+16	Ω.cm	ASTM D257
Surface Resistivity	5.00E+16	Ω	ASTM D257
Dielectric Constant, 1.1 GHz	4.07	-	SABIC method
Dielectric Constant, 1.9 GHz	4.1	-	SABIC method
Dielectric Constant, 5 GHz	4.09	-	SABIC method
Dissipation Factor, 1.1 GHz	0.00762	-	SABIC method
Dissipation Factor, 1.9 GHz	0.00811	-	SABIC method
Dissipation Factor, 5 GHz	0.00896	-	SABIC method
FLAME CHARACTERISTICS [2]			
UL Yellow Card Link	E207780-101219669	-	-
UL Recognized, 94V-0 Flame Class Rating	≥1	mm	UL 94
UL Recognized, 94V-1 Flame Class Rating	≥0.8	mm	UL 94
INJECTION MOLDING [4]			
Drying Temperature	110	°C	
Drying Time	3 – 6	Hrs	
Drying Time (Cumulative)	12	Hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	285 – 310	°C	
Nozzle Temperature	285 – 305	°C	
Front - Zone 3 Temperature	280 – 300	°C	
Middle - Zone 2 Temperature	270 – 290	°C	
Rear - Zone 1 Temperature	260 – 280	°C	
Mold Temperature	80 – 110	°C	
Back Pressure	0.1 – 0.3	MPa	
Screw Speed	50 – 90	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) 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.
(3) 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.
(4) 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

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