LNP™ THERMOCOMP™ Compound D251RCC

DESCRIPTION

LNP THERMOCOMP D251RCC compound is based on recycled Polycarbonate (PC) resin containing 20% glass fiber. Added features of this grade include: Colorable, High Modulus, Low Warpage, Good Ductility, Non-Brominated & Non-Chlorinated Flame Retardant. Post-Consumer Recycling (PCR) Polycarbonate content up to 40%

GENERAL INFORMATION	
Features	Flame Retardant, Low Warpage, Mechanical Recycling, Non Cl/Br flame retardant, High stiffness/Strength, Impact resistant
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 20260416

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Modulus, 5 mm/min	6650	MPa	ASTM D638
Tensile Stress, brk, Type I, 5 mm/min	100	MPa	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	2.9	%	ASTM D638
Flexural Modulus, 1.3 mm/min, 50 mm span	6300	MPa	ASTM D790
Flexural Strength, 1.3 mm/min, 50 mm span	161	MPa	ASTM D790
Tensile Modulus, 1 mm/min	6750	MPa	ISO 527
Tensile Stress, break, 5 mm/min	108	MPa	ISO 527
Tensile Strain, break, 5 mm/min	3.1	%	ISO 527
Flexural Modulus, 2 mm/min	6100	MPa	ISO 178
Flexural Strength, 2 mm/min	157	MPa	ISO 178
IMPACT [1]			
Izod Impact, notched, 23°C	139	J/m	ASTM D256
Izod Impact, notched, -30°C	94	J/m	ASTM D256
Izod Impact, unnotched, 23°C	616	J/m	ASTM D4812
Izod Impact, notched 80*10*4 +23°C	12	kJ/m²	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	9	kJ/m²	ISO 180/1A
Izod Impact, unnotched 80*10*4 +23°C	38	kJ/m²	ISO 180/1U
Instrumented Dart Impact Total Energy, 23°C	24	J	ASTM D3763
THERMAL [1]			
HDT, 1.82 MPa, 3.2mm, unannealed	114	°C	ASTM D648

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
HDT, 0.45 MPa, 3.2 mm, unannealed	119	°C	ASTM D648
Vicat Softening Temp, Rate B/50	122	°C	ISO 306
Vicat Softening Temp, Rate B/120	125	°C	ISO 306
CTE, 23°C to 80°C, flow	2.5E-05	1/°C	ASTM E831
CTE, 23°C to 80°C, xflow	7.4E-05	1/°C	ASTM E831
PHYSICAL [1]			
Density	1.37	g/cm³	ASTM D792
Melt Flow Rate			
300°C/2.16 kgf	31	g/10 min	ASTM D1238
300°C/1.2 kgf	16	g/10 min	ASTM D1238
Melt Volume Rate			
300°C/2.16 kg	27	cm³/10 min	ISO 1133
300°C/1.2 kg	13	cm³/10 min	ISO 1133
Mold Shrinkage, flow, 24 hrs [2]	0.2 – 0.4	%	ASTM D955
Mold Shrinkage, xflow, 24 hrs [2]	0.2 – 0.4	%	ASTM D955
Water Absorption, (23°C/24hrs)	0.03	%	ISO 62-1
ELECTRICAL [1]			
Dielectric Constant			
1.1 GHz	3.21	-	SABIC method
1.9 GHz	3.22	-	SABIC method
5 GHz	3.22	-	SABIC method
10 GHz	3.22	-	SABIC method
Dissipation Factor			
1.1 GHz	0.0064	-	SABIC method
1.9 GHz	0.0065	-	SABIC method
5 GHz	0.0067	-	SABIC method
10 GHz	0.0069	-	SABIC method
FLAME CHARACTERISTICS [3]			
UL Yellow Card Link	E207780-103855643	-	-
UL Recognized, 94V-0 Flame Class Rating	≥0.6	mm	UL 94
INJECTION MOLDING [4]			
Drying Temperature	110	°C	
Drying Time	3 – 6	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	

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(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) 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.

(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.

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