LNP™ THERMOCOMP™ Compound D10001VP

DESCRIPTION

LNP THERMOCOMP D10001VP compound is based on Polycarbonate (PC) resin. 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, High Impact Strength and Ductility under room and low temperatures and Good Outdoor Weathering performance. D10001VP is available in black only.

GENERAL INFORMATION	
Features	Flame Retardant, Laser Direct Structuring, Non Cl/Br flame retardant, Dimensional stability, Low temperature impact, Weatherable/UV stable
Fillers	Unreinforced
Brands	LNP™ THERMOCOMP™
Polymer Types	Polycarbonate (PC)
Processing Techniques	Injection Molding

INDUSTRY	SUB INDUSTRY
Consumer	Commercial Appliance
Industrial	Material Handling

TYPICAL PROPERTY VALUES

Revision 20261009

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Stress, brk, Type I, 50 mm/min	55	MPa	ASTM D638
Tensile Strain, brk, Type I, 50 mm/min	95	%	ASTM D638
Tensile Modulus, 50 mm/min	2250	MPa	ASTM D638
Flexural Strength, 1.3 mm/min, 50 mm span	91	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	2200	MPa	ASTM D790
IMPACT [1]			
Izod impact, notched			
23°C	800	J/m	ASTM D256
-20°C	600	J/m	ASTM D256
-30°C	450	J/m	ASTM D256
-40°C	220	J/m	ASTM D256
Izod Impact, Unnotched			
23°C	NB	J/m	ASTM D4812
THERMAL [1]			
HDT, 0.45 MPa, 3.2 mm, unannealed	132	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	121	°C	ASTM D648
CTE, -40°C to 40°C, flow	6.5E-05	1/°C	ASTM E831
CTE, -40°C to 40°C, xflow	6.5E-05	1/°C	ASTM E831
PHYSICAL [1]			
Density	1.21	g/cm³	ASTM D792
Mold Shrinkage, flow [2]	0.4 – 0.8	%	SABIC method

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Mold Shrinkage, xflow [2]	0.4 – 0.8	%	SABIC method
ELECTRICAL [1]			
Dielectric Constant			
1.9 GHz	2.8	-	SABIC method
Dissipation Factor			
1.9 GHz	0.006	-	SABIC method
FLAME CHARACTERISTICS [3]			
UL Yellow Card Link	E207780-104487788	-	-
UL Recognized, 94V-0 Flame Class Rating	≥1.5	mm	UL 94
UV-light, water exposure/immersion	f1	-	UL 746C
INJECTION MOLDING [4]			
Drying Temperature	90 – 110	°C	
Drying Time	3 – 4	Hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	250 – 310	°C	
Nozzle Temperature	250 – 310	°C	
Front - Zone 3 Temperature	240 – 290	°C	
Middle - Zone 2 Temperature	240 – 280	°C	
Rear - Zone 1 Temperature	240 – 260	°C	
Mold Temperature	80 – 120	°C	
Back Pressure	0.3 – 0.7	MPa	
Screw Speed	40 – 70	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) 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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