LNP™ COLORCOMP™ COMPOUND G1000

G-1000

DESCRIPTION

LNP COLORCOMP G1000 compound is based on unfilled Polysulfone (PSU) resin. Added features of this grade include: Transparent.

GENERAL INFORMATION	
Features	Aesthetics/Visual effects, High temperature resistance, No PFAS intentionally added
Fillers	Unreinforced
Polymer Types	Polysulfone (PSU)
Processing Techniques	Injection Molding

INDUSTRY	SUB INDUSTRY
Automotive	Automotive Interiors
Consumer	Sport/Leisure, Personal Accessory, Home Appliances, Commercial Appliance
Electrical and Electronics	Mobile Phone - Computer - Tablets

TYPICAL PROPERTY VALUES

Revision 20231109

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Modulus, 1 mm/min	2500	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	5.9	%	ISO 527
Tensile Stress, break, 50 mm/min	60	MPa	ISO 527
Tensile Stress, yield, 50 mm/min	76	MPa	ISO 527
Flexural Modulus, 2 mm/min	2500	MPa	ISO 178
Flexural Stress, yield, 2 mm/min	115	MPa	ISO 178
Tensile Stress, brk, Type I, 5 mm/min	70	MPa	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	50 – 100	%	ASTM D638
Tensile Modulus, 50 mm/min	2480	MPa	ASTM D638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	106	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	2690	MPa	ASTM D790
IMPACT [1]			
Izod Impact, notched 80*10*4 +23°C	6	kJ/m²	ISO 180/1A
Izod Impact, unnotched 80*10*4 +23°C	NB	kJ/m²	ISO 180/1U
Izod Impact, notched, 23°C	69	J/m	ASTM D256
THERMAL [1]			
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	170	°C	ISO 75/Af
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	183	°C	ISO 75/Bf
CTE, 23°C to 60°C, flow	6.10E-05	1/°C	ISO 11359-2
CTE, 23°C to 60°C, xflow	6.20E-05	1/°C	ISO 11359-2
HDT, 1.82 MPa, 3.2mm, unannealed	174	°C	ASTM D648
CTE, -30°C to 30°C, flow	5.6E-05	1/°C	ASTM D696

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Relative Temp Index, Elec [2]	160	°C	UL 746B
Relative Temp Index, Mech w/impact [2]	140	°C	UL 746B
Relative Temp Index, Mech w/o impact [2]	160	°C	UL 746B
PHYSICAL [1]			
Density	1.24	g/cm³	ISO 1183
Water Absorption, (23°C/24hrs)	0.4	%	ISO 62-1
Specific Gravity	1.24	-	ASTM D792
Moisture Absorption, (23°C/50% RH/24 hrs)	0.3	%	ASTM D570
Mold Shrinkage, flow [3]	0.4 – 0.7	%	SABIC method
ELECTRICAL [1]			
Volume Resistivity	3.E+17	Ω.cm	ASTM D257
Dissipation Factor, 50/60 Hz	0.0007	-	ASTM D150
Dissipation Factor, 1 kHz	0.001	-	ASTM D150
Dissipation Factor, 1 MHz	0.006	-	ASTM D150
Comparative Tracking Index (UL) {PLC}	4	PLC Code	UL 746A
Hot-Wire Ignition (HWI), PLC 1	≥4.5	mm	UL 746A
Hot-Wire Ignition (HWI), PLC 3	≥1.5	mm	UL 746A
High Amp Arc Ignition (HAI), PLC 3	≥6	mm	UL 746A
High Amp Arc Ignition (HAI), PLC 4	≥1.5	mm	UL 746A
High Voltage Arc Track Rate {PLC}	4	PLC Code	UL 746A
Arc Resistance, Tungsten {PLC}	7	PLC Code	ASTM D495
FLAME CHARACTERISTICS [2]			
UL Yellow Card Link	E121562-104116794	-	-
UL Yellow Card Link 2	E45329-104098070	-	-
UL Recognized, 94V-0 Flame Class Rating	≥4.5	mm	UL 94
UL Recognized, 94HB Flame Class Rating	≥1.5	mm	UL 94
INJECTION MOLDING [4]			
Drying Temperature	120 – 150	°C	
Drying Time	4	Hrs	
Maximum Moisture Content	0.05	%	
Melt Temperature	360 – 370	°C	
Front - Zone 3 Temperature	350 – 360	°C	
Middle - Zone 2 Temperature	340 – 350	°C	
Rear - Zone 1 Temperature	325 – 340	°C	
Mold Temperature	150	°C	
Back Pressure	0.2 – 0.3	MPa	
Screw Speed	30 – 60	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.

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