

LNP™ COLORCOMP™ 144C compound

Polycarbonate

SABIC Innovative Plastics

Message:

LNP* COLORCOMP* 144C is a compound based on Polycarbonate. Added features of this grade include: UL rated HB, 200 series recommended when V-2 rating required, 10.5 MFR, FDA food contact compliant in limited colors. Effective January 15, 2007 this grade will no longer be supported with biocompatibility information and should not be used for medical applications which require biocompatibility.

General Information			
UL YellowCard	E121562-102799035		
Features	Compliance of Food Exposure		
Agency Ratings	FDA Food Exposure, Not Rated 3		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity			
--	1.20	g/cm ³	ASTM D792
--	1.19	g/cm ³	ISO 1183, ASTM D792
Specific Volume	0.830	cm ³ /g	ASTM D792
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	11	g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR) (300°C/1.2 kg)	10.0	cm ³ /10min	ISO 1133
Molding Shrinkage - Flow (3.20 mm)	0.50 - 0.70	%	Internal method
Water Absorption			
24 hr	0.15	%	ASTM D570
Saturated, 23°C	0.26	%	ISO 62
Equilibrium, 23°C	0.35	%	ASTM D570
Equilibrium, 100°C	0.58	%	ASTM D570
Equilibrium, 23°C, 50% RH	0.10	%	ISO 62
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness			ASTM D785
Class m	70		ASTM D785
Class r	118		ASTM D785
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ¹	2300	MPa	ASTM D638
--	2390	MPa	ISO 527-2/1
Tensile Strength			
Yield ²	62.0	MPa	ASTM D638
Yield	61.0	MPa	ISO 527-2/50
Fracture ³	68.0	MPa	ASTM D638
Fracture	73.0	MPa	ISO 527-2/50

Tensile Elongation			
Yield ⁴	7.0	%	ASTM D638
Yield	6.0	%	ISO 527-2/50
Fracture ⁵	130	%	ASTM D638
Fracture	130	%	ISO 527-2/50
Flexural Modulus			
50.0mm span ⁶	2340	MPa	ASTM D790
--	2250	MPa	ISO 178
-- ⁷	2250	MPa	ISO 178
Flexural Stress			
--	93.0	MPa	ISO 178
Yield, 50.0mm span ⁸	96.0	MPa	ASTM D790
Taber Abrasion Resistance (1000 Cycles, 1000 g, CS-17 Wheel)	10.0	mg	ASTM D1044
Impact	Nominal Value	Unit	Test Method
Charpy Unnotched Impact Strength ⁹ (23°C)	82	kJ/m ²	ISO 179/1eU
Notched Izod Impact			
-30°C	220	J/m	ASTM D256
23°C	800	J/m	ASTM D256
-30°C ¹⁰	10	kJ/m ²	ISO 180/1A
23°C ¹¹	71	kJ/m ²	ISO 180/1A
Unnotched Izod Impact (23°C)	3200	J/m	ASTM D4812
Instrumented Dart Impact (23°C, Total Energy)	88.0	J	ASTM D3763
Dart Drop Impact (23°C)	169	J	ASTM D3029
Tensile Impact Strength ¹²	577	kJ/m ²	ASTM D1822
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, unannealed, 6.40mm	137	°C	ASTM D648
1.8 MPa, unannealed, 3.20mm	126	°C	ASTM D648
1.8 MPa, unannealed, 6.40mm	132	°C	ASTM D648
1.8 MPa, unannealed, 100 mm span ¹³	127	°C	ISO 75-2/Ae
Vicat Softening Temperature			
--	154	°C	ASTM D1525 ¹⁴
--	143	°C	ISO 306/B50
--	145	°C	ISO 306/B120
Ball Pressure Test (125°C)	Pass		IEC 60695-10-2
Linear thermal expansion coefficient			
Flow: -40 to 40°C	7.8E-5	cm/cm/°C	ASTM E831, ISO 11359-2
Flow: -40 to 95°C	6.8E-5	cm/cm/°C	ASTM E831
Lateral: -40 to 40°C	7.6E-5	cm/cm/°C	ASTM E831, ISO 11359-2
Lateral: -40 to 95°C	6.8E-5	cm/cm/°C	ASTM E831

Specific Heat	1250	J/kg/°C	ASTM C351
Thermal Conductivity	0.19	W/m/K	ASTM C177
RTI Elec	130	°C	UL 746
RTI Imp	130	°C	UL 746
RTI	130	°C	UL 746
Electrical	Nominal Value	Unit	Test Method
Volume Resistivity	> 1.0E+17	ohms·cm	ASTM D257
Dielectric Strength (3.20 mm, in Air)	15	kV/mm	ASTM D149
Dielectric Constant			ASTM D150
50 Hz	3.17		ASTM D150
60 Hz	3.17		ASTM D150
1 MHz	2.96		ASTM D150
Dissipation Factor			ASTM D150
50 Hz	9.0E-4		ASTM D150
60 Hz	9.0E-4		ASTM D150
1 MHz	0.010		ASTM D150
Comparative Tracking Index (CTI)	PLC 2		UL 746
High Amp Arc Ignition (HAI)	PLC 1		UL 746
High Voltage Arc Tracking Rate (HVTR)	PLC 2		UL 746
Hot-wire Ignition (HWI)	PLC 2		UL 746
Flammability	Nominal Value	Unit	Test Method
Flame Rating (1.5 mm)	HB		UL 94
Oxygen Index	25	%	ASTM D2863
Optical	Nominal Value	Unit	Test Method
Refractive Index	1.586		ASTM D542
Transmittance (2540 µm)	88.0	%	ASTM D1003
Haze (2540 µm)	1.0	%	ASTM D1003
Injection	Nominal Value	Unit	
Drying Temperature	121	°C	
Drying Time	3.0 - 4.0	hr	
Drying Time, Maximum	48	hr	
Suggested Max Moisture	0.020	%	
Suggested Shot Size	40 - 60	%	
Rear Temperature	271 - 293	°C	
Middle Temperature	282 - 304	°C	
Front Temperature	293 - 316	°C	
Nozzle Temperature	288 - 310	°C	
Processing (Melt) Temp	293 - 316	°C	
Mold Temperature	71 - 93	°C	
Back Pressure	0.345 - 0.689	MPa	
Screw Speed	40 - 70	rpm	
Vent Depth	0.025 - 0.076	mm	

NOTE	
1.	50 mm/min
2.	Type 1, 50mm/min
3.	Type 1, 50mm/min
4.	Type 1, 50mm/min
5.	Type 1, 50mm/min
6.	1.3 mm/min
7.	2.0 mm/min
8.	1.3 mm/min
9.	80*10*4 sp=62mm
10.	80*10*4
11.	80*10*4
12.	Type S
13.	120*10*4 mm
14.	标准 B (120°C/h), 载荷2 (50N)

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