

LNP™ COLORCOMP™ 223RC compound

Polycarbonate
SABIC Innovative Plastics

Message:

COLORCOMP® 223RC is an unfilled compound based on Polycarbonate resin. Added features include: Flame Retardant, Mold Release, UV Stabilized. For use in small, intricate parts.

General Information			
Additive	UV stabilizer		
Features	Good UV resistance		
	Good demoulding performance		
	Flame retardancy		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity			ASTM D792
--	1.20	g/cm³	ASTM D792
--	1.19	g/cm³	ASTM D792
Specific Volume	0.830	cm³/g	ASTM D792
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	18	g/10 min	ASTM D1238
Molding Shrinkage - Flow (3.20 mm)	0.50 - 0.70	%	Internal method
Water Absorption			ASTM D570
24 hr	0.15	%	ASTM D570
Equilibrium, 23°C	0.35	%	ASTM D570
Equilibrium, 100°C	0.58	%	ASTM D570
Outdoor Suitability	f1		UL 746C
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 Strength ¹			ASTM D638
Yield	62.1	MPa	ASTM D638
Fracture	65.5	MPa	ASTM D638
Tensile Elongation ²			ASTM D638
Yield	7.0	%	ASTM D638
Fracture	110	%	ASTM D638
Flexural Modulus ³ (50.0 mm Span)	2340	MPa	ASTM D790
Flexural Strength ⁴ (Yield, 50.0 mm Span)	93.1	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 Notched Impact Strength ⁵			ISO 179/1eA
-30°C	12	kJ/m ²	ISO 179/1eA
23°C	65	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength ⁶			ISO 179/1eU
-30°C	No Break		ISO 179/1eU
23°C	No Break		ISO 179/1eU
Notched Izod Impact			
23°C	690	J/m	ASTM D256
-30°C ⁷	11	kJ/m ²	ISO 180/1A
23°C ⁸	65	kJ/m ²	ISO 180/1A
Unnotched Izod Impact			
23°C	3200	J/m	ASTM D4812
-30°C ⁹	No Break		ISO 180/1U
23°C ¹⁰	No Break		ISO 180/1U
Dart Drop Impact (23°C)	169	J	ASTM D3029
Tensile Impact Strength ¹¹	546	kJ/m ²	ASTM D1822
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
0.45 MPa, unannealed, 6.40mm	138	°C	ASTM D648
1.8 MPa, unannealed, 6.40mm	132	°C	ASTM D648
Vicat Softening Temperature	154	°C	ASTM D1525 ¹²
CLTE - Flow (-40 to 95°C)	6.8E-5	cm/cm/°C	ASTM E831
Specific Heat	1260	J/kg/°C	ASTM C351
Thermal Conductivity	0.25	W/m/K	ASTM C177
RTI Elec	100	°C	UL 746
RTI Imp	100	°C	UL 746
RTI	100	°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 4		UL 746
Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
0.75 mm	V-2		UL 94
6.0 mm	V-0		UL 94
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	260 - 282	°C	
Middle Temperature	271 - 293	°C	
Front Temperature	282 - 304	°C	
Nozzle Temperature	277 - 299	°C	
Processing (Melt) Temp	282 - 304	°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.	Type 1, 50mm/min		
2.	Type 1, 50mm/min		
3.	1.3 mm/min		
4.	1.3 mm/min		
5.	80*10*3 sp=62mm		
6.	80*10*3 sp=62mm		
7.	80*10*3		
8.	80*10*3		
9.	80*10*3		
10.	80*10*3		
11.	Type S		
12.	标准 B (120°C/h), 载荷2 (50N)		

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