

CYCOLOY™ CY6414 resin

Polycarbonate + ABS

SABIC Innovative Plastics Europe

Message:

Flame retardant modified PC using non-brominated and non-chlorinated flame retardant systems, offering high heat for application in appliances, lighting and electrical market.

General Information			
Additive	Flame retardancy		
Features	Chlorine Free		
	Heat resistance, high		
	Bromine-free		
	Flame retardancy		
Uses	Lighting Applications		
	Electrical/Electronic Applications		
	Electrical appliances		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Density	1.18	g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR) (260°C/5.0 kg)	14	g/10 min	ASTM D1238
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus ¹	2330	MPa	ASTM D638
Tensile Strength ²			ASTM D638
Yield	64.0	MPa	ASTM D638
Fracture	62.0	MPa	ASTM D638
Tensile Elongation			
Yield ³	6.0	%	ASTM D638
Yield	5.7	%	ISO 527-2/50
Fracture ⁴	85	%	ASTM D638
Fracture	> 100	%	ISO 527-2/50
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength ⁵			ISO 179/1eA
-30°C	12	kJ/m ²	ISO 179/1eA
0°C	17	kJ/m ²	ISO 179/1eA
23°C	28	kJ/m ²	ISO 179/1eA
Notched Izod Impact			ASTM D256
-30°C	220	J/m	ASTM D256
0°C	530	J/m	ASTM D256

23°C	800	J/m	ASTM D256
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (1.8 MPa, Unannealed, 6.40 mm)	118	°C	ASTM D648
Vicat Softening Temperature			
--	134	°C	ISO 306/B50
--	135	°C	ISO 306/B120
Ball Pressure Test			IEC 60695-10-2
125°C	Pass		IEC 60695-10-2
125°C ⁶	Pass		IEC 60695-10-2
Linear thermal expansion coefficient			ISO 11359-2
Flow: -40 to 40°C	7.0E-5	cm/cm/°C	ISO 11359-2
Lateral: -40 to 40°C	7.0E-5	cm/cm/°C	ISO 11359-2
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	0.0 - 4.0E+16	ohms	IEC 60093
Dielectric Constant			ASTM D150
1 kHz	3.01		ASTM D150
1 MHz	2.95		ASTM D150
Dissipation Factor			
1 kHz	1.7E-3		ASTM D150
1 MHz	8.8E-3		ASTM D150, IEC 60250
Comparative Tracking Index (CTI)	PLC 3		UL 746
High Amp Arc Ignition (HAI)	PLC 1		UL 746
Hot-wire Ignition (HWI)	PLC 2		UL 746
Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
1.20 mm	V-0		UL 94
2.50 mm	5VB		UL 94
Glow Wire Flammability Index ⁷ (0.750 mm)	960	°C	IEC 60695-2-12
Glow Wire Ignition Temperature ⁸			IEC 60695-2-13
0.750 mm	775	°C	IEC 60695-2-13
1.50 mm	775	°C	IEC 60695-2-13
3.00 mm	775	°C	IEC 60695-2-13
Oxygen Index	32	%	ISO 4589-2
Injection	Nominal Value	Unit	
Drying Temperature	90.0 - 100	°C	
Drying Time	2.0 - 4.0	hr	
Suggested Max Moisture	0.020	%	
Hopper Temperature	60.0 - 80.0	°C	
Rear Temperature	210 - 260	°C	
Middle Temperature	230 - 290	°C	
Front Temperature	240 - 300	°C	

Nozzle Temperature	230 - 290	°C
Processing (Melt) Temp	250 - 300	°C
Mold Temperature	60.0 - 90.0	°C

NOTE		
1.	5.0 mm/min	
2.	Type 1, 50mm/min	
3.	Type 1, 50mm/min	
4.	Type 1, 50mm/min	
5.	80*10*3 sp=62mm	
6.	by VDE	
7.	by VDE	
8.	by VDE	

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