

CYCOLOY™ CY6310 resin

Polycarbonate + ABS

SABIC Innovative Plastics

Message:

Flame retardant PC/ABS blend using non-brominated and non-chlorinated flame retardant systems, offering hydrolytic stability and excellent flow / impact balance for a wide variety of thin wall or large size applications including business equipment, enclosures, among others.

General Information			
Additive	Flame Retardant		
Features	Bromine Free		
	Chlorine Free		
	Flame Retardant		
	Hydrolytically Stable		
Uses	Business Equipment		
	Housings		
	Thin-walled Parts		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.17	g/cm ³	ASTM D792, ISO 1183
Melt Mass-Flow Rate (MFR)			ASTM D1238
250°C/2.16 kg	16	g/10 min	
260°C/2.16 kg	20	g/10 min	
Melt Volume-Flow Rate (MVR) (260°C/2.16 kg)	19.0	cm ³ /10min	ISO 1133
Molding Shrinkage - Flow (3.20 mm)	0.40 to 0.60	%	Internal Method
Water Absorption			ISO 62
Saturation, 23°C	0.60	%	
Equilibrium, 23°C, 50% RH	0.20	%	
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ¹	2700	MPa	ASTM D638
--	2700	MPa	ISO 527-2/1
Tensile Strength			
Yield ²	63.0	MPa	ASTM D638
Yield	63.0	MPa	ISO 527-2/50
Break ³	50.0	MPa	ASTM D638
Break	51.0	MPa	ISO 527-2/50
Tensile Elongation			
Yield ⁴	4.2	%	ASTM D638

Yield	4.4	%	ISO 527-2/50
Break ⁵	> 50	%	ASTM D638
Break	> 50	%	ISO 527-2/50
Flexural Modulus			
50.0 mm Span ⁶	2700	MPa	ASTM D790
-- ⁷	2650	MPa	ISO 178
Flexural Stress			
--	91.0	MPa	ISO 178
Yield, 50.0 mm Span ⁸	101	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength ⁹			ISO 179/1eA
-30°C	14	kJ/m ²	
23°C	55	kJ/m ²	
Charpy Unnotched Impact Strength ¹⁰ (23°C)	No Break		ISO 179/1eU
Notched Izod Impact			
-30°C	120	J/m	ASTM D256
23°C	600	J/m	ASTM D256
-30°C ¹¹	13	kJ/m ²	ISO 180/1A
23°C ¹²	50	kJ/m ²	ISO 180/1A
Unnotched Izod Impact Strength ¹³ (23°C)	No Break		ISO 180/1U
Instrumented Dart Impact			
23°C, Total Energy	65.0	J	ASTM D3763
--	105	J	ISO 6603-2
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, Unannealed, 3.20 mm	100	°C	ASTM D648
1.8 MPa, Unannealed, 3.20 mm	88.0	°C	ASTM D648
1.8 MPa, Unannealed, 64.0 mm Span ¹⁴	90.0	°C	ISO 75-2/Af
Vicat Softening Temperature			
--	109	°C	ASTM D1525, ISO 306/B50 10 ¹⁵
--	111	°C	ISO 306/B120
Ball Pressure Test			IEC 60695-10-2
75°C	Pass		
95°C ¹⁶	Pass		
CLTE			ASTM E831, ISO 11359-2
Flow : -40 to 40°C	6.8E-5	cm/cm/°C	
Transverse : -40 to 40°C	7.0E-5	cm/cm/°C	
RTI Elec	85.0	°C	UL 746
RTI Imp	85.0	°C	UL 746
RTI Str	85.0	°C	UL 746
Electrical	Nominal Value	Unit	Test Method

Surface Resistivity	> 1.0E+15	ohms	IEC 60093
Volume Resistivity	> 1.0E+15	ohms·cm	IEC 60093
Comparative Tracking Index	575	V	IEC 60112
High Amp Arc Ignition (HAI)	PLC 0		UL 746
Hot-wire Ignition (HWI)	PLC 3		UL 746
Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
0.750 mm	V-2		
0.750 mm, Testing by SABIC	V-2		
1.50 mm	V-0		
1.50 mm, Testing by SABIC	V-0		
2.30 mm	5VB		
2.30 mm, Testing by SABIC	5VB		
2.90 mm	5VA		
2.90 mm, Testing by SABIC	5VA		
Glow Wire Flammability Index (3.00 mm)	960	°C	IEC 60695-2-12
Oxygen Index	30	%	ISO 4589-2
Injection	Nominal Value	Unit	
Drying Temperature	90.0 to 100	°C	
Drying Time	2.0 to 4.0	hr	
Suggested Max Moisture	0.020	%	
Hopper Temperature	60.0 to 80.0	°C	
Rear Temperature	210 to 240	°C	
Middle Temperature	230 to 270	°C	
Front Temperature	240 to 280	°C	
Nozzle Temperature	230 to 270	°C	
Processing (Melt) Temp	250 to 280	°C	
Mold Temperature	60.0 to 90.0	°C	
NOTE			
1.	5.0 mm/min		
2.	Type I, 50 mm/min		
3.	Type I, 50 mm/min		
4.	Type I, 50 mm/min		
5.	Type I, 50 mm/min		
6.	1.3 mm/min		
7.	2.0 mm/min		
8.	1.3 mm/min		
9.	80*10*3 sp=62mm		
10.	80*10*3 sp=62mm		
11.	80*10*3		
12.	80*10*3		
13.	80*10*3		

14.	80*10*4 mm
15.	Rate B (120°C/h), Loading 2 (50 N)
16.	Approximate maximum

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Recommended distributors for this material

Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China

