

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			
UL YellowCard	E45329-627630		
Features	Chlorine Free		
	Impact resistance, good		
	Good liquidity		
	Hydrolysis stability		
	Bromine-free		
	Flame retardancy		
Uses	Thin wall parts		
	Business equipment		
	Shell		
RoHS Compliance	RoHS compliance		
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	ASTM D1238
260°C/2.16 kg	20	g/10 min	ASTM D1238
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 - 0.60	%	Internal method
Water Absorption			ISO 62
Saturated, 23°C	0.60	%	ISO 62
Equilibrium, 23°C, 50% RH	0.20	%	ISO 62
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
Fracture ³	50.0	MPa	ASTM D638

Fracture	51.0	MPa	ISO 527-2/50
Tensile Elongation			
Yield ⁴	4.2	%	ASTM D638
Yield	4.4	%	ISO 527-2/50
Fracture ⁵	> 50	%	ASTM D638
Fracture	> 50	%	ISO 527-2/50
Flexural Modulus			
50.0mm span ⁶	2700	MPa	ASTM D790
-- ⁷	2650	MPa	ISO 178
Flexural Stress			
--	91.0	MPa	ISO 178
Yield, 50.0mm span ⁸	101	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength ⁹			ISO 179/1eA
	14		
-30°C	14	kJ/m ²	ISO 179/1eA
	55		
23°C	55	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength ¹⁰			ISO 179/1eU
	No Break		
-30°C	No Break		ISO 179/1eU
	No Break		
23°C	No Break		ISO 179/1eU
Notched Izod Impact			
-30°C	120	J/m	ASTM D256
23°C	600	J/m	ASTM D256
	13		
-30°C ¹¹	13	kJ/m ²	ISO 180/1A

	50		
23°C ¹²	50	kJ/m ²	ISO 180/1A
Unnotched Izod Impact Strength ¹³			ISO 180/1U
	No Break		
-30°C	No Break		ISO 180/1U
	No Break		
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, 3.20mm	100	°C	ASTM D648
1.8 MPa, unannealed, 3.20mm	88.0	°C	ASTM D648
1.8 MPa, unannealed, 64.0mm span ¹⁴	90.0	°C	ISO 75-2/Af
Vicat Softening Temperature			
--	109	°C	ASTM D1525, ISO 306/B50 11 ¹⁵
--	111	°C	ISO 306/B120
Ball Pressure Test			IEC 60695-10-2
75°C	Pass		IEC 60695-10-2
95°C ¹⁶	Pass		IEC 60695-10-2
Linear thermal expansion coefficient			ASTM E831, ISO 11359-2
Flow: -40 to 40°C	6.8E-5	cm/cm/°C	ASTM E831, ISO 11359-2
Lateral: -40 to 40°C	7.0E-5	cm/cm/°C	ASTM E831, ISO 11359-2
RTI Elec	85.0	°C	UL 746
RTI Imp	85.0	°C	UL 746
RTI	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		UL 94
0.750 mm, Testing by SABIC	V-2		UL 94
1.50 mm	V-0		UL 94
1.50 mm, Testing by SABIC	V-0		UL 94
2.30 mm	5VB		UL 94
2.30 mm, Testing by SABIC	5VB		UL 94
2.90 mm	5VA		UL 94
2.90 mm, Testing by SABIC	5VA		UL 94
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 - 100	°C	
Drying Time	2.0 - 4.0	hr	
Suggested Max Moisture	0.020	%	
Hopper Temperature	60.0 - 80.0	°C	
Rear Temperature	210 - 240	°C	
Middle Temperature	230 - 270	°C	
Front Temperature	240 - 280	°C	
Nozzle Temperature	230 - 270	°C	
Processing (Melt) Temp	250 - 280	°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.	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 sp=62mm		
11.	80*10*4		
12.	80*10*4		
13.	80*10*4		
14.	80*10*4 mm		
15.	标准 B (120°C/h), 载荷2 (50N)		
16.	Approximate maximum		

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