

CYCOLOY™ CY6110 resin

Polycarbonate + ABS

SABIC Innovative Plastics Europe

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	E121562-100157400		
Additive	Flame retardancy		
Features	Chlorine Free		
	Impact resistance, good		
	Good liquidity		
	Hydrolysis stability		
	Bromine-free		
	Flame retardancy		
Uses	Thin wall parts		
	Business equipment		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Density	1.18	g/cm ³	ISO 1183
Melt Volume-Flow Rate (MVR) (260°C/2.16 kg)	23.0	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	2760	MPa	ASTM D638
--	2750	MPa	ISO 527-2/1
Tensile Strength			
Yield ²	63.9	MPa	ASTM D638
Yield	63.1	MPa	ISO 527-2/50
Fracture ³	47.5	MPa	ASTM D638
Fracture	46.4	MPa	ISO 527-2/50
Tensile Elongation			
Yield ⁴	4.1	%	ASTM D638
Yield	4.0	%	ISO 527-2/50

Fracture ⁵	65	%	ASTM D638
Fracture	35	%	ISO 527-2/50
Flexural Modulus ⁶	2440	MPa	ISO 178
Flexural Stress	94.5	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-30°C ⁷	10	kJ/m ²	ISO 179/1eA
23°C ⁸	33	kJ/m ²	ISO 179/1eA
23°C ⁹	45	kJ/m ²	ISO 179/1eA
Notched Izod Impact			
-30°C	100	J/m	ASTM D256
23°C	480	J/m	ASTM D256
-30°C ¹⁰	12	kJ/m ²	ISO 180/1A
-30°C ¹¹	10	kJ/m ²	ISO 180/1A
23°C ¹²	45	kJ/m ²	ISO 180/1A
23°C ¹³	23	kJ/m ²	ISO 180/1A
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature ¹⁴			
0.45 MPa, unannealed, 64.0mm span	98.6	°C	ISO 75-2/Bf
1.8 MPa, unannealed, 64.0mm span	88.1	°C	ISO 75-2/Af
Vicat Softening Temperature			
--	105	°C	ISO 306/B50
--	106	°C	ISO 306/B120
Ball Pressure Test (75°C)	Pass		IEC 60695-10-2
Linear thermal expansion coefficient			ISO 11359-2
Flow: -40 to 40°C	8.0E-6	cm/cm/°C	ISO 11359-2
Lateral: -40 to 40°C	8.0E-6	cm/cm/°C	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
Dielectric Strength			IEC 60243-1
0.800mm, in oil	46	kV/mm	IEC 60243-1
1.60mm, in oil	31	kV/mm	IEC 60243-1
Relative Permittivity			IEC 60250
50 Hz	2.90		IEC 60250
60 Hz	2.90		IEC 60250
1 MHz	2.90		IEC 60250
Dissipation Factor			IEC 60250
50 Hz	2.0E-3		IEC 60250

60 Hz	2.0E-3		IEC 60250
1 MHz	7.0E-3		IEC 60250
Comparative Tracking Index (CTI)	PLC 2		UL 746
Hot-wire Ignition (HWI)	PLC 3		UL 746
Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
1.50 mm	V-0		UL 94
2.50 mm	5VB		UL 94
Glow Wire Flammability Index (1.00 mm)	960	°C	IEC 60695-2-12
Glow Wire Ignition Temperature			IEC 60695-2-13
1.00 mm	825	°C	IEC 60695-2-13
2.00 mm	825	°C	IEC 60695-2-13
3.00 mm	825	°C	IEC 60695-2-13
Oxygen Index	31	%	ISO 4589-2
Injection	Nominal Value	Unit	
Drying Temperature	80.0 - 90.0	°C	
Drying Time	2.0 - 4.0	hr	
Suggested Max Moisture	0.020	%	
Hopper Temperature	60.0 - 80.0	°C	
Rear Temperature	230 - 280	°C	
Middle Temperature	240 - 290	°C	
Front Temperature	250 - 300	°C	
Nozzle Temperature	250 - 300	°C	
Processing (Melt) Temp	250 - 300	°C	
Mold Temperature	60.0 - 85.0	°C	
Vent Depth	0.030 - 0.075	mm	
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.	2.0 mm/min		
7.	80*10*3 sp=62mm		
8.	80*10*4 sp=62mm		
9.	80*10*3 sp=62mm		
10.	80*10*4		
11.	80*10*3		
12.	80*10*3		
13.	80*10*4		
14.	80*10*4 mm		

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