

CYCOLOY™ CM6240 resin

Polycarbonate + ABS

SABIC Innovative Plastics Asia Pacific

Message:

CYCOLOY CM6240 resin is a flame retardant PC/ABS blend featuring balanced properties of high modulus, good flow and ductility. It is of Br- & Cl-free flame retardant systems intended to meet thin wall flame resistance and various environmental requirements.

General Information			
UL YellowCard	E207780-608377		
Features	Bromine Free		
	Chlorine Free		
	Ductile		
	Flame Retardant		
	Good Flow		
Uses	Thin-walled Parts		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.30	g/cm ³	ASTM D792, ISO 1183
Melt Mass-Flow Rate (MFR) (260°C/2.16 kg)	17	g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR) (260°C/2.16 kg)	15.0	cm ³ /10min	ISO 1133
Molding Shrinkage			Internal Method
Flow	0.33	%	
Flow : 3.20 mm	0.30 to 0.40	%	
Across Flow	0.38	%	
Water Absorption			ISO 62
Saturation, 23°C	0.10	%	
Equilibrium, 23°C, 50% RH	0.030	%	
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ¹	4350	MPa	ASTM D638
--	4460	MPa	ISO 527-2/1
Tensile Strength			
Yield ²	55.0	MPa	ASTM D638
Yield	56.0	MPa	ISO 527-2/5
Break ³	40.0	MPa	ASTM D638
Break	29.0	MPa	ISO 527-2/5
Tensile Elongation			
Yield ⁴	3.0	%	ASTM D638

Yield	3.0	%	ISO 527-2/5
Break ⁵	35	%	ASTM D638
Break	25	%	ISO 527-2/5
Flexural Modulus			
50.0 mm Span ⁶	4400	MPa	ASTM D790
-- ⁷	4510	MPa	ISO 178
Flexural Stress			
--	101	MPa	ISO 178
Yield, 50.0 mm Span ⁸	96.0	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength ⁹ (23°C)	6.0	kJ/m ²	ISO 179/1eA
Notched Izod Impact			
-30°C	60	J/m	ASTM D256
23°C	86	J/m	ASTM D256
-30°C ¹⁰	7.0	kJ/m ²	ISO 180/1A
23°C ¹¹	7.0	kJ/m ²	ISO 180/1A
Instrumented Dart Impact			ASTM D3763
-30°C, Total Energy	35.0	J	
23°C, Total Energy	56.0	J	
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
1.8 MPa, Unannealed, 6.40 mm	90.0	°C	ASTM D648
1.8 MPa, Unannealed, 64.0 mm Span ¹²	86.0	°C	ISO 75-2/ Af
Vicat Softening Temperature			
--	97.0	°C	ASTM D1525, ISO 306/B50 11 ¹³
--	100	°C	ISO 306/B120
CLTE			
Flow : -40 to 40°C	4.9E-5	cm/cm/°C	ASTM E831
Flow : -40 to 40°C	4.8E-5	cm/cm/°C	ISO 11359-2
Transverse : -40 to 40°C	6.4E-5	cm/cm/°C	ASTM E831
Transverse : -40 to 40°C	6.3E-5	cm/cm/°C	ISO 11359-2
Flammability	Nominal Value		Test Method
Flame Rating			UL 94
0.800 mm, Testing by SABIC	V-0		
1.50 mm, Testing by SABIC	5VB		
Injection	Nominal Value	Unit	
Drying Temperature	80.0 to 90.0	°C	
Drying Time	4.0 to 6.0	hr	
Drying Time, Maximum	16	hr	
Suggested Max Moisture	0.040	%	
Rear Temperature	220 to 255	°C	

Middle Temperature	230 to 275	°C
Front Temperature	255 to 285	°C
Nozzle Temperature	255 to 285	°C
Processing (Melt) Temp	255 to 285	°C
Mold Temperature	70.0 to 95.0	°C

NOTE

1.	5.0 mm/min
2.	Type I, 5.0 mm/min
3.	Type I, 5.0 mm/min
4.	Type I, 5.0 mm/min
5.	Type I, 5.0 mm/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
11.	80*10*4
12.	80*10*4 mm
13.	Rate B (120°C/h), Loading 2 (50 N)

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