

CYCOLOY™ CX2142ME resin

Polycarbonate + ABS

SABIC Innovative Plastics

Message:

CYCOLOY resin grade CX2142ME is an injection moldable PC/ABS blend with Br- and Cl-free flame retardant systems. Key features of good flow, good impact, UL-94 V0 rating at 1.2 mm, and improved chemical resistance to generally used hospital cleaners, make it ideal for a wide variety of applications including enclosures for medical and hospital equipments.

General Information			
UL YellowCard	E207780-546814		
Additive	Flame retardancy		
Features	Chlorine Free		
	Impact resistance, good		
	Good liquidity		
	Good chemical resistance		
	Bromine-free		
Uses	Flame retardancy		
	Shell		
	Medical/nursing supplies		
Processing Method	Medical equipment		
	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.19	g/cm ³	ASTM D792, ISO 1183
Melt Mass-Flow Rate (MFR) (260°C/2.16 kg)	23	g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR) (260°C/2.16 kg)	21.0	cm ³ /10min	ISO 1133
Molding Shrinkage - Flow (3.20 mm)	0.40 - 0.60	%	Internal method
Water Absorption			ISO 62
Saturated, 23°C	0.20	%	ISO 62
Equilibrium, 23°C, 50% RH	0.10	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ¹	2900	MPa	ASTM D638
--	2700	MPa	ISO 527-2/1
Tensile Strength			
Yield ²	64.0	MPa	ASTM D638
Yield	61.0	MPa	ISO 527-2/50
Fracture ³	54.0	MPa	ASTM D638

Fracture	51.0	MPa	ISO 527-2/50
Tensile Elongation			
Yield ⁴	4.0	%	ASTM D638
Yield	4.0	%	ISO 527-2/50
Fracture ⁵	90	%	ASTM D638
Fracture	90	%	ISO 527-2/50
Flexural Modulus			
50.0mm span ⁶	2700	MPa	ASTM D790
-- ⁷	2500	MPa	ISO 178
Flexural Stress			
--	100	MPa	ISO 178
Yield, 50.0mm span ⁸	100	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength ⁹			ISO 179/1eA
-30°C	10	kJ/m ²	ISO 179/1eA
23°C	15	kJ/m ²	ISO 179/1eA
Notched Izod Impact			
-30°C	120	J/m	ASTM D256
23°C	600	J/m	ASTM D256
-30°C ¹⁰	10	kJ/m ²	ISO 180/1A
23°C ¹¹	15	kJ/m ²	ISO 180/1A
Instrumented Dart Impact (23°C, Total Energy)	63.0	J	ASTM D3763
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, unannealed, 3.20mm	94.0	°C	ASTM D648
0.45 MPa, unannealed, 6.40mm	98.0	°C	ASTM D648
1.8 MPa, unannealed, 3.20mm	84.0	°C	ASTM D648
1.8 MPa, unannealed, 6.40mm	90.0	°C	ASTM D648
1.8 MPa, unannealed, 64.0mm span ¹²	84.0	°C	ISO 75-2/af
Vicat Softening Temperature	102	°C	ASTM D1525, ISO 306/B50, ISO 306/B120 ¹³
Ball Pressure Test (75°C)	Pass		IEC 60695-10-2
Linear thermal expansion coefficient			ASTM E831, ISO 11359-2
Flow: -40 to 40°C	7.5E-5	cm/cm/°C	ASTM E831, ISO 11359-2
Lateral: -40 to 40°C	7.5E-5	cm/cm/°C	ASTM E831, ISO 11359-2
Thermal Conductivity	0.20	W/m/K	ISO 8302
Flammability	Nominal Value		Test Method
Flame Rating			UL 94
1.20 mm	V-0		UL 94
2.00 mm	5VB		UL 94
Injection	Nominal Value	Unit	
Drying Temperature	82.2 - 87.8	°C	

Drying Time	3.0 - 4.0	hr
Drying Time, Maximum	8.0	hr
Suggested Max Moisture	0.040	%
Suggested Shot Size	30 - 80	%
Rear Temperature	221 - 254	°C
Middle Temperature	221 - 266	°C
Front Temperature	243 - 277	°C
Nozzle Temperature	243 - 277	°C
Processing (Melt) Temp	243 - 277	°C
Mold Temperature	60.0 - 82.2	°C
Back Pressure	0.345 - 0.689	MPa
Screw Speed	40 - 70	rpm
Vent Depth	0.038 - 0.076	mm

NOTE

- | | |
|-----|---------------------------|
| 1. | 50 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*3 sp=62mm |
| 10. | 80*10*3 |
| 11. | 80*10*3 |
| 12. | 80*10*4 mm |
| 13. | 标准 B (120°C/h), 载荷2 (50N) |

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