

CYCOLOY™ CX2142ME resin

Polycarbonate + ABS

SABIC Innovative Plastics

Message:

Cycloy* 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 equipment.

General Information			
UL YellowCard	E121562-546902		
Additive	Flame Retardant		
Features	Bromine Free		
	Chlorine Free		
	Flame Retardant		
	Good Chemical Resistance		
	Good Flow		
	Good Impact Resistance		
Uses	Hospital Goods		
	Housings		
	Medical/Healthcare Applications		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.19	g/cm³	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	cm³/10min	ISO 1133
Molding Shrinkage - Flow (3.20 mm)	0.40 to 0.60	%	Internal Method
Water Absorption			ISO 62
Saturation, 23°C	0.20	%	
Equilibrium, 23°C, 50% RH	0.10	%	
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
Break ³	54.0	MPa	ASTM D638

Break	51.0	MPa	ISO 527-2/50
Tensile Elongation			
Yield ⁴	4.0	%	ASTM D638
Yield	4.0	%	ISO 527-2/50
Break ⁵	90	%	ASTM D638
Break	90	%	ISO 527-2/50
Flexural Modulus			
50.0 mm Span ⁶	2700	MPa	ASTM D790
-- ⁷	2500	MPa	ISO 178
Flexural Stress			
--	100	MPa	ISO 178
Yield, 50.0 mm 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	
23°C	15	kJ/m ²	
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, 3.20 mm	94.0	°C	ASTM D648
0.45 MPa, Unannealed, 6.40 mm	98.0	°C	ASTM D648
1.8 MPa, Unannealed, 3.20 mm	84.0	°C	ASTM D648
1.8 MPa, Unannealed, 6.40 mm	90.0	°C	ASTM D648
1.8 MPa, Unannealed, 64.0 mm 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
CLTE			ASTM E831, ISO 11359-2
Flow : -40 to 40°C	7.5E-5	cm/cm/°C	
Transverse : -40 to 40°C	7.5E-5	cm/cm/°C	
Thermal Conductivity	0.20	W/m/K	ISO 8302
Flammability	Nominal Value		Test Method
Flame Rating			UL 94
1.20 mm	V-0		
2.00 mm	5VB		
Injection	Nominal Value	Unit	
Drying Temperature	82.2 to 87.8	°C	

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

NOTE

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

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