

CYCOLOY™ XCM830 resin

Polycarbonate + ABS

SABIC Innovative Plastics

Message:

PC/ABS with high stiffness and impact performance

General Information			
Features	Rigidity, high		
	Impact resistance, high		
RoHS Compliance	RoHS compliance		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.22	g/cm ³	ASTM D792, ISO 1183
Melt Mass-Flow Rate (MFR) (260°C/5.0 kg)	11	g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR) (260°C/5.0 kg)	9.00	cm ³ /10min	ISO 1133
Molding Shrinkage - Flow (3.20 mm)	0.70 - 0.80	%	Internal method
Water Absorption			ISO 62
Saturated, 23°C	0.40	%	ISO 62
Equilibrium, 23°C, 50% RH	0.10	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ¹	3400	MPa	ASTM D638
--	3100	MPa	ISO 527-2/1
Tensile Strength			
Yield ²	60.0	MPa	ASTM D638
Yield	56.0	MPa	ISO 527-2/5
Fracture ³	55.0	MPa	ASTM D638
Fracture	55.0	MPa	ISO 527-2/5
Tensile Elongation			
Yield ⁴	5.0	%	ASTM D638
Yield	5.0	%	ISO 527-2/5
Fracture ⁵	100	%	ASTM D638
Fracture	100	%	ISO 527-2/5
Flexural Modulus			
50.0mm span ⁶	3100	MPa	ASTM D790
-- ⁷	3100	MPa	ISO 178
Flexural Stress			
--	95.0	MPa	ISO 178

Yield, 50.0mm span ⁸	95.0	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength ⁹			ISO 179/1eA
	10		
-30°C	10	kJ/m ²	ISO 179/1eA
	45		
23°C	45	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	500	J/m	ASTM D256
	10		
-30°C ¹¹	10	kJ/m ²	ISO 180/1A
	40		
23°C ¹²	40	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
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
1.8 MPa, unannealed, 3.20mm	118	°C	ASTM D648
1.8 MPa, unannealed, 64.0mm span ¹⁴	118	°C	ISO 75-2/Af
Vicat Softening Temperature			
--	138	°C	ASTM D1525, ISO 306/B50 10 ¹⁵
--	140	°C	ISO 306/B120
Ball Pressure Test (125°C)	Pass		IEC 60695-10-2
Linear thermal expansion coefficient			ASTM E831, ISO 11359-2
Flow: -40 to 40°C	6.0E-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
Thermal Conductivity	0.20	W/m/K	ISO 8302
Injection	Nominal Value	Unit	
Drying Temperature	110 - 120	°C	
Drying Time	2.0 - 6.0	hr	
Suggested Max Moisture	0.020	%	
Suggested Shot Size	30 - 80	%	
Rear Temperature	260 - 270	°C	
Middle Temperature	265 - 290	°C	
Front Temperature	270 - 300	°C	
Nozzle Temperature	260 - 290	°C	
Processing (Melt) Temp	270 - 300	°C	
Mold Temperature	60.0 - 100	°C	
Back Pressure	0.300 - 0.700	MPa	
Screw Speed	40 - 70	rpm	
Vent Depth	0.038 - 0.076	mm	
NOTE			
1.	5.0 mm/min		
2.	Type 1, 5.0 mm/min		
3.	Type 1, 5.0 mm/min		
4.	Type 1, 5.0 mm/min		
5.	Type 1, 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 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)

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