

CYCOLOY™ XCM830 resin

Polycarbonate + ABS

SABIC Innovative Plastics

Message:

PC/ABS with high stiffness and impact performance

General Information			
Features	High Impact Resistance		
	High Stiffness		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.22	g/cm³	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	cm³/10min	ISO 1133
Molding Shrinkage - Flow (3.20 mm)	0.70 to 0.80	%	Internal Method
Water Absorption			ISO 62
Saturation, 23°C	0.40	%	
Equilibrium, 23°C, 50% RH	0.10	%	
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
Break ³	55.0	MPa	ASTM D638
Break	55.0	MPa	ISO 527-2/5
Tensile Elongation			
Yield ⁴	5.0	%	ASTM D638
Yield	5.0	%	ISO 527-2/5
Break ⁵	100	%	ASTM D638
Break	100	%	ISO 527-2/5
Flexural Modulus			
50.0 mm Span ⁶	3100	MPa	ASTM D790
-- ⁷	3100	MPa	ISO 178
Flexural Stress			
--	95.0	MPa	ISO 178
Yield, 50.0 mm Span ⁸	95.0	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	45	kJ/m ²	
Notched Izod Impact			
-30°C	120	J/m	ASTM D256
23°C	500	J/m	ASTM D256
-30°C ¹⁰	10	kJ/m ²	ISO 180/1A
23°C ¹¹	45	kJ/m ²	ISO 180/1A
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, 3.20 mm	118	°C	ASTM D648
1.8 MPa, Unannealed, 64.0 mm Span ¹²	118	°C	ISO 75-2/Af
Vicat Softening Temperature			
--	138	°C	ASTM D1525, ISO 306/B50 ¹³
--	140	°C	ISO 306/B120
Ball Pressure Test (125°C)	Pass		IEC 60695-10-2
CLTE			ASTM E831, ISO 11359-2
Flow : -40 to 40°C	6.0E-5	cm/cm/°C	
Transverse : -40 to 40°C	7.0E-5	cm/cm/°C	
Thermal Conductivity	0.20	W/m/K	ISO 8302
Injection	Nominal Value	Unit	
Drying Temperature	110 to 120	°C	
Drying Time	2.0 to 6.0	hr	
Suggested Max Moisture	0.020	%	
Suggested Shot Size	30 to 80	%	
Rear Temperature	260 to 270	°C	
Middle Temperature	265 to 290	°C	
Front Temperature	270 to 300	°C	
Nozzle Temperature	260 to 290	°C	
Processing (Melt) Temp	270 to 300	°C	
Mold Temperature	60.0 to 100	°C	
Back Pressure	0.300 to 0.700	MPa	
Screw Speed	40 to 70	rpm	
Vent Depth	0.038 to 0.076	mm	
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*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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