

CYCOLOY™ XCY620S resin

Polycarbonate + ABS

SABIC Innovative Plastics

Message:

PC+ ABS automotive applications, excellent flow/impact balance, high heat resistance temperature and excellent properties retention after hydrolytic and heat aging.

General Information			
Features	Impact resistance, good		
	Good liquidity		
	Good heat aging resistance		
	Heat resistance, high		
	Hydrolysis stability		
Uses	Application in Automobile Field		
RoHS Compliance	RoHS compliance		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.14	g/cm ³	ASTM D792, ISO 1183
Melt Volume-Flow Rate (MVR)			ISO 1133
260°C/5.0 kg	20.0	cm ³ /10min	ISO 1133
265°C/5.0 kg	25.0	cm ³ /10min	ISO 1133
Molding Shrinkage			Internal method
Flow: 3.20mm	0.50 - 0.70	%	Internal method
Transverse flow: 3.20mm	0.50 - 0.70	%	Internal method
Water Absorption			ISO 62
23°C, 24 hr	0.30	%	ISO 62
Saturated, 23°C	0.40	%	ISO 62
Equilibrium, 23°C, 50% RH	0.13	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	2200	MPa	ISO 527-2/1
Tensile Stress			ISO 527-2/50
Yield	54.0	MPa	ISO 527-2/50
Fracture	56.0	MPa	ISO 527-2/50
Tensile Strain			ISO 527-2/50
Yield	4.5	%	ISO 527-2/50
Fracture	100	%	ISO 527-2/50
Flexural Modulus			
50.0mm span ¹	2300	MPa	ASTM D790
-- ²	2200	MPa	ISO 178

Flexural Stress			
--	82.0	MPa	ISO 178
Yield, 50.0mm span ³	86.0	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength ⁴			ISO 179/1eA
-30°C	45	kJ/m ²	ISO 179/1eA
23°C	60	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength ⁵			ISO 179/1eU
	No Break		
-30°C	No Break		ISO 179/1eU
	No Break		
23°C	No Break		ISO 179/1eU
Notched Izod Impact ⁶			ISO 180/1A
-30°C	40	kJ/m ²	ISO 180/1A
23°C	55	kJ/m ²	ISO 180/1A
Unnotched Izod Impact Strength ⁷			ISO 180/1U
	No Break		
-30°C	No Break		ISO 180/1U
	No Break		
23°C	No Break		ISO 180/1U
Instrumented Dart Impact			ASTM D3763
-30°C, Total Energy	65.0	J	ASTM D3763
23°C, Total Energy	55.0	J	ASTM D3763
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, unannealed, 3.20mm	128	°C	ASTM D648
0.45 MPa, unannealed, 64.0mm span ⁸	126	°C	ISO 75-2/Bf
1.8 MPa, unannealed, 3.20mm	108	°C	ASTM D648
1.8 MPa, unannealed, 64.0mm span ⁹	106	°C	ISO 75-2/Af
Vicat Softening Temperature			
--	129	°C	ASTM D1525 ¹⁰
--	130	°C	ISO 306/B120
Ball Pressure Test			IEC 60695-10-2

75°C	Pass		IEC 60695-10-2
100°C ¹¹	Pass		IEC 60695-10-2
Linear thermal expansion coefficient			ASTM E831
Flow: -40 to 40°C	7.0E-5	cm/cm/°C	ASTM E831
Lateral: -40 to 40°C	7.0E-5	cm/cm/°C	ASTM E831
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	> 1.0E+16	ohms	IEC 60093
Volume Resistivity	> 1.0E+16	ohms·cm	IEC 60093
Dielectric Strength			IEC 60243-1
0.800mm, in oil	39	kV/mm	IEC 60243-1
1.60mm, in oil	25	kV/mm	IEC 60243-1
3.20mm, in oil	17	kV/mm	IEC 60243-1
Injection	Nominal Value	Unit	
Drying Temperature	95.0 - 105	°C	
Drying Time	2.0 - 4.0	hr	
Suggested Max Moisture	0.020	%	
Hopper Temperature	60.0 - 80.0	°C	
Rear Temperature	230 - 260	°C	
Middle Temperature	250 - 290	°C	
Front Temperature	250 - 290	°C	
Nozzle Temperature	240 - 280	°C	
Processing (Melt) Temp	260 - 290	°C	
Mold Temperature	60.0 - 90.0	°C	
NOTE			
1.	1.3 mm/min		
2.	2.0 mm/min		
3.	1.3 mm/min		
4.	80*10*4 sp=62mm		
5.	80*10*4 sp=62mm		
6.	80*10*4		
7.	80*10*4		
8.	80*10*4 mm		
9.	80*10*4 mm		
10.	标准 B (120°C/h), 载荷2 (50N)		
11.	Approximate maximum		

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