

CYCOLOY™ XCY620S resin

Polycarbonate + ABS

SABIC Innovative Plastics

Message:

PC+ ABS Automotive applications

General Information			
Uses	Automotive Applications		
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	
265°C/5.0 kg	25.0	cm ³ /10min	
Molding Shrinkage			Internal Method
Flow : 3.20 mm	0.50 to 0.70	%	
Across Flow : 3.20 mm	0.50 to 0.70	%	
Water Absorption			ISO 62
23°C, 24 hr	0.30	%	
Saturation, 23°C	0.40	%	
Equilibrium, 23°C, 50% RH	0.13	%	
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	2200	MPa	ISO 527-2/1
Tensile Stress			ISO 527-2/50
Yield	54.0	MPa	
Break	56.0	MPa	
Tensile Strain			ISO 527-2/50
Yield	4.5	%	
Break	100	%	
Flexural Modulus			
50.0 mm Span ¹	2300	MPa	ASTM D790
-- ²	2200	MPa	ISO 178
Flexural Stress			
--	82.0	MPa	ISO 178
Yield, 50.0 mm 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	
23°C	60	kJ/m ²	

Charpy Unnotched Impact Strength ⁵ (23°C)	No Break		ISO 179/1eU
Notched Izod Impact Strength ⁶			ISO 180/1A
-30°C	40	kJ/m ²	
23°C	55	kJ/m ²	
Instrumented Dart Impact			ASTM D3763
-30°C, Total Energy	65.0	J	
23°C, Total Energy	55.0	J	
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, Unannealed, 3.20 mm	128	°C	ASTM D648
0.45 MPa, Unannealed, 64.0 mm Span ⁷	126	°C	ISO 75-2/Bf
1.8 MPa, Unannealed, 3.20 mm	108	°C	ASTM D648
1.8 MPa, Unannealed, 64.0 mm Span ⁸	106	°C	ISO 75-2/Af
Vicat Softening Temperature			
--	129	°C	ASTM D1525 ⁹
--	130	°C	ISO 306/B120
Ball Pressure Test			IEC 60695-10-2
75°C	Pass		
100°C ¹⁰	Pass		
CLTE			ASTM E831
Flow : -40 to 40°C	7.0E-5	cm/cm/°C	
Transverse : -40 to 40°C	7.0E-5	cm/cm/°C	
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	> 1.0E+16	ohms	IEC 60093
Volume Resistivity	> 1.0E+16	ohms · cm	IEC 60093
Electric Strength			IEC 60243-1
0.800 mm, in Oil	39	kV/mm	
1.60 mm, in Oil	25	kV/mm	
3.20 mm, in Oil	17	kV/mm	
Injection	Nominal Value	Unit	
Drying Temperature	95.0 to 105	°C	
Drying Time	2.0 to 4.0	hr	
Drying Time, Maximum	8.0	hr	
Suggested Max Moisture	0.020	%	
Suggested Shot Size	30 to 80	%	
Hopper Temperature	60.0 to 80.0	°C	
Rear Temperature	230 to 260	°C	
Middle Temperature	250 to 290	°C	
Front Temperature	250 to 290	°C	
Nozzle Temperature	240 to 280	°C	
Processing (Melt) Temp	260 to 290	°C	

Mold Temperature	60.0 to 90.0	°C
Back Pressure	0.300 to 0.700	MPa
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*3 sp=62mm	
6.	80*10*4	
7.	80*10*4 mm	
8.	80*10*4 mm	
9.	Rate B (120°C/h), Loading 2 (50 N)	
10.	Approximate maximum	

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