

CYCOLOY™ XCY630 resin

Polycarbonate + ABS

SABIC Innovative Plastics

Message:

PC/ABS, hydrolytically stable.

General Information			
Features	Hydrolysis stability		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.14	g/cm ³	ASTM D792, ISO 1183
Melt Mass-Flow Rate (MFR) (260°C/5.0 kg)	26	g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR) (260°C/5.0 kg)	22.0	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
Saturated, 23°C	0.40	%	ISO 62
Equilibrium, 23°C, 50% RH	0.15	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ¹	2300	MPa	ASTM D638
--	2250	MPa	ISO 527-2/1
Tensile Strength			
Yield ²	54.0	MPa	ASTM D638
Yield	54.0	MPa	ISO 527-2/50
Fracture ³	53.0	MPa	ASTM D638
Fracture	53.0	MPa	ISO 527-2/50
Tensile Elongation			
Yield ⁴	4.5	%	ASTM D638
Yield	4.5	%	ISO 527-2/50
Fracture ⁵	120	%	ASTM D638
Fracture	120	%	ISO 527-2/50
Flexural Modulus			
50.0mm span ⁶	2300	MPa	ASTM D790
-- ⁷	2200	MPa	ISO 178
Flexural Stress			
--	82.0	MPa	ISO 178
Yield, 50.0mm span ⁸	89.0	MPa	ASTM D790

Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength ⁹			ISO 179/1eA
-30°C	30	kJ/m ²	ISO 179/1eA
23°C	65	kJ/m ²	ISO 179/1eA
Notched Izod Impact			
-30°C	430	J/m	ASTM D256
23°C	590	J/m	ASTM D256
-30°C ¹⁰	30	kJ/m ²	ISO 180/1A
23°C ¹¹	65	kJ/m ²	ISO 180/1A
Instrumented Dart Impact			ASTM D3763
-30°C, Total Energy	67.0	J	ASTM D3763
23°C, Total Energy	55.0	J	ASTM D3763
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature			
0.45 MPa, unannealed, 64.0mm span ¹²	126	°C	ISO 75-2/Bf
1.8 MPa, unannealed, 3.20mm	107	°C	ASTM D648
1.8 MPa, unannealed, 64.0mm span ¹³	105	°C	ISO 75-2/Af
Vicat Softening Temperature			
--	126	°C	ASTM D1525, ISO 306/B50 ¹⁴
--	127	°C	ISO 306/B120
Ball Pressure Test (75°C)	Pass		IEC 60695-10-2
Linear thermal expansion coefficient			
Flow: -40 to 40°C	7.0E-5	cm/cm/°C	ASTM E831
Flow: -40 to 40°C	8.0E-5	cm/cm/°C	ISO 11359-2
Lateral: -40 to 40°C	7.0E-5	cm/cm/°C	ASTM E831
Lateral: -40 to 40°C	8.0E-5	cm/cm/°C	ISO 11359-2
Thermal Conductivity	0.20	W/m/K	ISO 8302
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	> 1.0E+15	ohms	IEC 60093
Volume Resistivity	> 1.0E+15	ohms · cm	IEC 60093
Dielectric Strength			IEC 60243-1
0.800mm, in oil	35	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
Fill Analysis	Nominal Value	Unit	Test Method
Melt Viscosity (260°C, 1500 sec ⁻¹)	170	Pa · s	ISO 11443
Injection	Nominal Value	Unit	
Drying Temperature	95 - 105	°C	
Drying Time	2.0 - 4.0	hr	
Suggested Max Moisture	0.020	%	
Hopper Temperature	60 - 80	°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 - 90	°C

NOTE

1.	5.0 mm/min
2.	Type 1, 50mm/min
3.	Type 1, 50mm/min
4.	Type 1, 50mm/min
5.	Type 1, 50mm/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.	80*10*4 mm
14.	标准 B (120°C/h), 载荷2 (50N)

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