

CYCOLOY™ CP8320 resin

Polycarbonate + ABS
SABIC Innovative Plastics Europe

Message:
CYCOLOY Medium Heat Plating Grade for Automotive

General Information			
Features	Medium Heat Resistance		
	Platable		
Uses	Automotive Applications		
RoHS Compliance	RoHS Compliant		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.10	g/cm ³	ASTM D792, ISO 1183
Melt Mass-Flow Rate (MFR) (260°C/5.0 kg)	14	g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR) (260°C/5.0 kg)	13.0	cm ³ /10min	ISO 1133
Molding Shrinkage - Flow (3.20 mm)	0.50 to 0.70	%	Internal Method
Water Absorption			ISO 62
Saturation, 23°C	0.30	%	
Equilibrium, 23°C, 50% RH	0.10	%	
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ¹	2100	MPa	ASTM D638
--	2100	MPa	ISO 527-2/1
Tensile Strength			
Yield ²	45.0	MPa	ASTM D638
Yield	45.0	MPa	ISO 527-2/50
Break ³	40.0	MPa	ASTM D638
Break	40.0	MPa	ISO 527-2/50
Tensile Elongation			
Yield ⁴	4.0	%	ASTM D638
Yield	4.0	%	ISO 527-2/50
Break ⁵	100	%	ASTM D638
Break	100	%	ISO 527-2/50
Flexural Modulus			
50.0 mm Span ⁶	2000	MPa	ASTM D790
-- ⁷	2000	MPa	ISO 178
Flexural Stress			

--	65.0	MPa	ISO 178
Yield, 50.0 mm Span ⁸	70.0	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength ⁹			ISO 179/1eA
	30		
-30°C	30	kJ/m ²	
	60		
23°C	60	kJ/m ²	
Charpy Unnotched Impact Strength ¹⁰			ISO 179/1eU
	No Break		
-30°C	No Break		
	No Break		
23°C	No Break		
Notched Izod Impact			
-30°C	400	J/m	ASTM D256
23°C	600	J/m	ASTM D256
	30		
-30°C ¹¹	30	kJ/m ²	ISO 180/1A
	60		
23°C ¹²	60	kJ/m ²	ISO 180/1A
Unnotched Izod Impact Strength ¹³			ISO 180/1U
	No Break		
-30°C	No Break		

	No Break		
23°C	No Break		
Instrumented Dart Impact (23°C, Total Energy)	55.0	J	ASTM D3763
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
1.8 MPa, Unannealed, 3.20 mm	90.0	°C	ASTM D648
1.8 MPa, Unannealed, 64.0 mm Span ¹⁴	92.0	°C	ISO 75-2/Af
Vicat Softening Temperature			
--	106	°C	ASTM D1525, ISO 306/B50 10 ¹⁵
--	107	°C	ISO 306/B120
Ball Pressure Test (75°C)	Pass		IEC 60695-10-2
CLTE			ASTM E831, ISO 11359-2
Flow : -40 to 40°C	9.0E-5	cm/cm/°C	
Transverse : -40 to 40°C	9.0E-5	cm/cm/°C	
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
Electric Strength			IEC 60243-1
0.800 mm, in Oil	35	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	
Suggested Max Moisture	0.020	%	
Hopper Temperature	60.0 to 80.0	°C	
Rear Temperature	220 to 250	°C	
Middle Temperature	240 to 280	°C	
Front Temperature	240 to 280	°C	
Nozzle Temperature	230 to 270	°C	
Processing (Melt) Temp	250 to 280	°C	
Mold Temperature	60.0 to 90.0	°C	
NOTE			
1.	5.0 mm/min		
2.	Type I, 50 mm/min		
3.	Type I, 50 mm/min		
4.	Type I, 50 mm/min		

5.	Type I, 50 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.	Rate B (120°C/h), Loading 2 (50 N)

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