

SABIC Innovative Plastics Cycoloy® CP8320 PC+ABS (Asia Pacific)

Category : Polymer , Thermoplastic , ABS Polymer , Polycarbonate/ABS Alloy, Unreinforced , Polycarbonate (PC)

Material Notes:

Cycoloy Medium Heat Plating Grade for Automotive

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Cycoloy-CP8320-PCABS-Asia-Pacific.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.10 g/cc	1.10 g/cc	ASTM D792
Density	1.10 g/cc	0.0397 lb/in ³	ISO 1183
Moisture Absorption	0.100 %	0.100 %	23°C / 50% RH; ISO 62
Water Absorption at Saturation	0.30 %	0.30 %	ISO 62
Linear Mold Shrinkage, Flow	0.0050 - 0.0070 cm/cm @Thickness 3.20 mm	0.0050 - 0.0070 in/in @Thickness 0.126 in	SABIC Method
Melt Flow	14 g/10 min @Load 5.00 kg, Temperature 260 °C	14 g/10 min @Load 11.0 lb, Temperature 500 °F	ASTM D1238
Melt Index of Compound	13 g/10 min @Load 5.00 kg, Temperature 260 °C	13 g/10 min @Load 11.0 lb, Temperature 500 °F	MVR [cm ³ /10 min]; ISO 1133

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	40.0 MPa	5800 psi	Type I, 50 mm/min; ASTM D638
	40.0 MPa	5800 psi	50 mm/min; ISO 527
Tensile Strength, Yield	45.0 MPa	6530 psi	Type I, 50 mm/min; ASTM D638
	45.0 MPa	6530 psi	50 mm/min; ISO 527
Elongation at Break	100 %	100 %	Type I, 50 mm/min; ASTM D638
	100 %	100 %	50 mm/min; ISO 527
Elongation at Yield	4.0 %	4.0 %	Type I, 50 mm/min; ASTM D638
	4.0 %	4.0 %	50 mm/min; ISO 527
Tensile Modulus	2.10 GPa	305 ksi	5 mm/min; ASTM D638
	2.10 GPa	305 ksi	1 mm/min; ISO 527

Mechanical Properties	Metric	English	Comments
	70.0 MPa	10200 psi	1.3 mm/min, 50 mm span; ASTM D790
Flexural Modulus	2.00 GPa	290 ksi	1.3 mm/min, 50 mm span; ASTM D790
	2.00 GPa	290 ksi	2 mm/min; ISO 178
Izod Impact, Notched	6.00 J/cm	11.2 ft-lb/in	ASTM D256
	4.00 J/cm	7.49 ft-lb/in	ASTM D256
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Izod Impact, Notched (ISO)	60.0 kJ/m ²	28.6 ft-lb/in ²	80*10*3; ISO 180/1A
	30.0 kJ/m ²	14.3 ft-lb/in ²	80*10*3; ISO 180/1A
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Charpy Impact, Notched	6.00 J/cm ²	28.6 ft-lb/in ²	Edgew 80*10*3 sp=62mm; ISO 179/1eA
	3.00 J/cm ²	14.3 ft-lb/in ²	Edgew 80*10*3 sp=62mm; ISO 179/1eA
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Dart Drop, Total Energy	55.0 J	40.6 ft-lb	ASTM D3763
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	90.0 µm/m-°C	50.0 µin/in-°F	ASTM E 831
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	
	90.0 µm/m-°C	50.0 µin/in-°F	ISO 11359-2
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	
CTE, linear, Transverse to Flow	90.0 µm/m-°C	50.0 µin/in-°F	ASTM E 831
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	
	90.0 µm/m-°C	50.0 µin/in-°F	ISO 11359-2
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	
Thermal Conductivity	0.200 W/m-K	1.39 BTU-in/hr-ft ² -°F	ISO 8302
Deflection Temperature at 1.8 MPa (264 psi)	92.0 °C	198 °F	Flatw 80*10*4 sp=64mm; ISO 75/Af

Thermal Properties	90.0 °C Metric	194 °F English	Comments
	@Thickness 3.20 mm	@Thickness 0.126 in	
Vicat Softening Point	106 °C	223 °F	Rate B/50; ASTM D1525
	106 °C	223 °F	Rate B/50; ISO 306
	107 °C	225 °F	Rate B/120; ISO 306

Electrical Properties	Metric	English	Comments
Volume Resistivity	>= 1.00e+15 ohm-cm	>= 1.00e+15 ohm-cm	IEC 60093
Surface Resistance	>= 1.00e+15 ohm	>= 1.00e+15 ohm	ROA; IEC 60093
Dielectric Strength	17.0 kV/mm	432 kV/in	in oil; IEC 60243-1
	@Thickness 3.20 mm	@Thickness 0.126 in	
	25.0 kV/mm	635 kV/in	in oil; IEC 60243-1
	@Thickness 1.60 mm	@Thickness 0.0630 in	
	35.0 kV/mm	889 kV/in	in oil; IEC 60243-1
	@Thickness 0.800 mm	@Thickness 0.0315 in	

Descriptive Properties	Value	Comments
Ball Pressure Test, 75°C +/- 2°C	Pass	IEC 60695-10-2

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