

SABIC Innovative Plastics Cycoloy® CX7110 PC+ABS

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

Material Notes:

Cycoloy* resin grade CX7110 is an injection moldable PC/ABS blend with non-brominated and non-chlorinated flame retardant systems. Excellent impact/flow balance together with a UL-94 V0 rating at 1.2mm makes it an ideal candidate for various applications including thin wall designs.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Cycoloy-CX7110-PCABS.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.19 g/cc	1.19 g/cc	ASTM D792
Density	1.19 g/cc	0.0430 lb/in ³	ISO 1183
Moisture Absorption	0.100 %	0.100 %	23°C / 50% RH; ISO 62
Water Absorption at Saturation	0.20 %	0.20 %	ISO 62
Linear Mold Shrinkage, Flow	0.0040 - 0.0060 cm/cm @Thickness 3.20 mm	0.0040 - 0.0060 in/in @Thickness 0.126 in	SABIC Method
Melt Flow	22 g/10 min @Load 2.16 kg, Temperature 260 °C	22 g/10 min @Load 4.76 lb, Temperature 500 °F	ASTM D1238
Melt Index of Compound	21 g/10 min @Load 2.16 kg, Temperature 260 °C	21 g/10 min @Load 4.76 lb, Temperature 500 °F	MVR [cm ³ /10 min]; ISO 1133

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	51.0 MPa	7400 psi	50 mm/min; ISO 527
	54.0 MPa	7830 psi	Type I, 50 mm/min; ASTM D638
Tensile Strength, Yield	61.0 MPa	8850 psi	50 mm/min; ISO 527
	64.0 MPa	9280 psi	Type I, 50 mm/min; ASTM D638
Elongation at Break	90 %	90 %	Type I, 50 mm/min; ASTM D638
	90 %	90 %	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	2.70 GPa	392 ksi	1 mm/min; ISO 527

Mechanical Properties	Metric 2.50 GPa	English 363 ksi	Comments 50 mm/min; ASTM D638
Flexural Yield Strength	100 MPa	14500 psi	1.3 mm/min, 50 mm span; ASTM D790
	100 MPa	14500 psi	2 mm/min; ISO 178
Flexural Modulus	2.50 GPa	363 ksi	2 mm/min; ISO 178
	2.70 GPa	392 ksi	1.3 mm/min, 50 mm span; ASTM D790
Izod Impact, Notched	6.00 J/cm	11.2 ft-lb/in	ASTM D256
	1.20 J/cm @Temperature -30.0 °C	2.25 ft-lb/in @Temperature -22.0 °F	ASTM D256
Izod Impact, Notched (ISO)	15.0 kJ/m ²	7.14 ft-lb/in ²	80*10*3; ISO 180/1A
	10.0 kJ/m ² @Temperature -30.0 °C	4.76 ft-lb/in ² @Temperature -22.0 °F	80*10*3; ISO 180/1A
Charpy Impact, Notched	1.50 J/cm ²	7.14 ft-lb/in ²	Edgew 80*10*3 sp=62mm; ISO 179/1eA
	1.00 J/cm ² @Temperature -30.0 °C	4.76 ft-lb/in ² @Temperature -22.0 °F	Edgew 80*10*3 sp=62mm; ISO 179/1eA
Dart Drop, Total Energy	63.0 J	46.5 ft-lb	ASTM D3763
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	75.0 µm/m-°C	41.7 µin/in-°F	ASTM E 831
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	
	75.0 µm/m-°C	41.7 µin/in-°F	ISO 11359-2
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	
CTE, linear, Transverse to Flow	75.0 µm/m-°C	41.7 µin/in-°F	ASTM E 831
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	
	75.0 µm/m-°C	41.7 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

Thermal Properties (in psi)	94.0 °C Metric	201 °F English	Comments
Deflection Temperature at 0.46 MPa	@Thickness 3.20 mm	@Thickness 0.126 in	unannealed; ASTM D648
	98.0 °C	208 °F	unannealed; ASTM D648
	@Thickness 6.40 mm	@Thickness 0.252 in	
Deflection Temperature at 1.8 MPa (264 psi)	84.0 °C	183 °F	Flatw 80*10*4 sp=64mm; ISO 75/Af
	84.0 °C	183 °F	unannealed; ASTM D648
	@Thickness 3.20 mm	@Thickness 0.126 in	
	90.0 °C	194 °F	unannealed; ASTM D648
	@Thickness 6.40 mm	@Thickness 0.252 in	
Vicat Softening Point	102 °C	216 °F	Rate B/50; ASTM D1525
	102 °C	216 °F	Rate B/50; ISO 306
	103 °C	217 °F	Rate B/120; ISO 306
Flammability, UL94	V-2	V-2	UL 94
	@Thickness 0.750 mm	@Thickness 0.0295 in	
	V-1	V-1	UL 94
	@Thickness 1.00 mm	@Thickness 0.0394 in	
	V-0	V-0	UL 94
	@Thickness 1.20 mm	@Thickness 0.0472 in	
	5VB	5VB	UL 94
	@Thickness 1.80 mm	@Thickness 0.0709 in	

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

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