

SABIC Innovative Plastics Cycology® CX7240 PC+ABS

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

Material Notes:

Cycology* CX7240 resin is an injection moldable PC/ABS blend. It contains non-brominated and non-chlorinated flame retardant systems to meet UL-94 V0 at 0.75mm, V1 at 0.6mm, V2 at 0.2mm and 5VB at 1.5mm respectively. Excellent flow and impact balance together with the thin wall flame resistance and all color options make Cycology CX7240 an ideal candidate for a wide variety of thin wall applications.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Cycology-CX7240-PCABS.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.19 g/cc	1.19 g/cc	ASTM D792
Density	1.20 g/cc	0.0434 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	18 g/10 min @Load 2.16 kg, Temperature 260 °C	18 g/10 min @Load 4.76 lb, Temperature 500 °F	ASTM D1238
Melt Index of Compound	15 g/10 min @Load 2.16 kg, Temperature 260 °C	15 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	50.0 MPa	7250 psi	50 mm/min; ISO 527
	58.0 MPa	8410 psi	Type I, 50 mm/min; ASTM D638
Tensile Strength, Yield	65.0 MPa	9430 psi	Type I, 50 mm/min; ASTM D638
	65.0 MPa	9430 psi	50 mm/min; ISO 527
Elongation at Break	90 %	90 %	50 mm/min; ISO 527
	100 %	100 %	Type I, 50 mm/min; ASTM D638
Elongation at Yield	4.0 %	4.0 %	50 mm/min; ISO 527
	4.1 %	4.1 %	Type I, 50 mm/min; ASTM D638
Tensile Modulus	2.60 GPa	377 ksi	5 mm/min; ASTM D638

Mechanical Properties	Metric 2.50 GPa	English 363 ksi	Comments 1 mm/min; ISO 527
Flexural Yield Strength	96.0 MPa	13900 psi	2 mm/min; ISO 178
	104 MPa	15100 psi	1.3 mm/min, 50 mm span; ASTM D790
Flexural Modulus	2.50 GPa	363 ksi	1.3 mm/min, 50 mm span; ASTM D790
	2.50 GPa	363 ksi	2 mm/min; ISO 178
Izod Impact, Notched	7.00 J/cm	13.1 ft-lb/in	ASTM D256
	1.75 J/cm	3.28 ft-lb/in	ASTM D256
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Izod Impact, Notched (ISO)	20.0 kJ/m ²	9.52 ft-lb/in ²	80*10*3; ISO 180/1A
	25.0 kJ/m ²	11.9 ft-lb/in ²	80*10*4; ISO 180/1A
	10.0 kJ/m ²	4.76 ft-lb/in ²	80*10*4; ISO 180/1A
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	10.0 kJ/m ²	4.76 ft-lb/in ²	80*10*3; ISO 180/1A
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Charpy Impact, Notched	2.00 J/cm ²	9.52 ft-lb/in ²	Edgew 80*10*3 sp=62mm; ISO 179/1eA
	2.20 J/cm ²	10.5 ft-lb/in ²	Edgew 80*10*4 sp=62mm; ISO 179/1eA
	1.00 J/cm ²	4.76 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	65.0 J	47.9 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 -	@Temperature -40.0 -	

Thermal Properties	40.0 °C Metric	104 °F English	Comments
	75.0 µm/m-°C	41.7 µin/in-°F	
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	ISO 11359-2
Thermal Conductivity	0.200 W/m-K	1.39 BTU-in/hr-ft²-°F	ISO 8302
Deflection Temperature at 0.46 MPa (66 psi)	100 °C	212 °F	
	@Thickness 3.20 mm	@Thickness 0.126 in	unannealed; ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	93.0 °C	199 °F	
			Flatw 80*10*4 sp=64mm; ISO 75/Af
	89.0 °C	192 °F	
	@Thickness 3.20 mm	@Thickness 0.126 in	unannealed; ASTM D648
	99.0 °C	210 °F	
	@Thickness 6.40 mm	@Thickness 0.252 in	unannealed; ASTM D648
Vicat Softening Point	110 °C	230 °F	Rate B/50; ASTM D1525
	110 °C	230 °F	Rate B/50; ISO 306
	113 °C	235 °F	Rate B/120; ISO 306
UL RTI, Electrical	90.0 °C	194 °F	UL 746B
UL RTI, Mechanical with Impact	90.0 °C	194 °F	UL 746B
UL RTI, Mechanical without Impact	90.0 °C	194 °F	UL 746B
Flammability, UL94	V-1	V-1	
	@Thickness 0.600 mm	@Thickness 0.0236 in	UL 94
	V-0	V-0	
	@Thickness 0.750 mm	@Thickness 0.0295 in	UL 94
	5VB	5VB	
	@Thickness 1.50 mm	@Thickness 0.0591 in	UL 94
	5VA	5VA	
	@Thickness 3.00 mm	@Thickness 0.118 in	UL 94
Oxygen Index	34 %	34 %	ISO 4589
Glow Wire Test	775 °C	1430 °F	IEC 60695-2-13
	775 °C	1430 °F	IEC 60695-2-13
	775 °C	1430 °F	IEC 60695-2-13

Thermal Properties	Metric	English	Comments 2-13
	825 °C	1520 °F	IEC 60695-2-13
	960 °C	1760 °F	IEC 60695-2-12
	@Thickness 0.750 mm	@Thickness 0.0295 in	
	960 °C	1760 °F	IEC 60695-2-12
	@Thickness 0.750 mm	@Thickness 0.0295 in	

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	
Comparative Tracking Index	175 - 250 V	175 - 250 V	UL 746A
Hot Wire Ignition, HWI	15 - 30 sec	15 - 30 sec	UL 746A
High Amp Arc Ignition, HAI	>= 120 arcs	>= 120 arcs	UL 746A

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

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