

SABIC Innovative Plastics Cycloy® CY6120 PC+ABS

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

Material Notes:

Non-chlorinated and non-brominated flame retardant PC/ABS featuring good flow and impact properties. UL-94 V0 listed at 1.2mm intended for various thin wall applications.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Cycloy-CY6120-PCABS.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.19 g/cc	1.19 g/cc	ASTM D792
Linear Mold Shrinkage, Flow	0.0030 - 0.0050 cm/cm @Thickness 3.20 mm	0.0030 - 0.0050 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	16 g/10 min @Load 2.16 kg, Temperature 260 °C	16 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	49.0 MPa	7110 psi	50 mm/min; ISO 527
	59.0 MPa	8560 psi	Type I, 50 mm/min; ASTM D638
Tensile Strength, Yield	58.0 MPa	8410 psi	50 mm/min; ISO 527
	62.0 MPa	8990 psi	Type I, 50 mm/min; ASTM D638
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	2.60 GPa	377 ksi	1 mm/min; ISO 527
	2.96 GPa	429 ksi	50 mm/min; ASTM D638
Flexural Yield Strength	93.0 MPa	13500 psi	2 mm/min; ISO 178
	102 MPa	14800 psi	1.3 mm/min, 50 mm span; ASTM D790

Mechanical Properties	2.50 GPa Metric	363 ksi English	2 mm/min; ISO 178 Comments
	2.82 GPa	409 ksi	1.3 mm/min, 50 mm span; ASTM D790
Izod Impact, Notched	5.87 J/cm	11.0 ft-lb/in	ASTM D256
Izod Impact, Notched (ISO)	40.0 kJ/m ²	19.0 ft-lb/in ²	80*10*4; ISO 180/1A
Dart Drop, Total Energy	54.0 J @Temperature 23.0 °C	39.8 ft-lb @Temperature 73.4 °F	ASTM D3763

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	73.8 µm/m-°C	41.0 µin/in-°F	ASTM E 831
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	
CTE, linear, Transverse to Flow	80.0 µm/m-°C	44.4 µin/in-°F	ISO 11359-2
	@Temperature 23.0 - 80.0 °C	@Temperature 73.4 - 176 °F	
CTE, linear, Transverse to Flow	80.0 µm/m-°C	44.4 µin/in-°F	ISO 11359-2
	@Temperature 23.0 - 80.0 °C	@Temperature 73.4 - 176 °F	
Deflection Temperature at 0.46 MPa (66 psi)	93.0 °C	199 °F	unannealed; ASTM D648
	@Thickness 3.20 mm	@Thickness 0.126 in	
Deflection Temperature at 1.8 MPa (264 psi)	85.0 °C	185 °F	unannealed; ASTM D648
	@Thickness 3.20 mm	@Thickness 0.126 in	
Vicat Softening Point	95.0 °C	203 °F	Rate B/50; ISO 306
	96.0 °C	205 °F	Rate B/50; ASTM D1525
	98.0 °C	208 °F	Rate B/120; ISO 306
UL RTI, Electrical	60.0 °C	140 °F	UL 746B
UL RTI, Mechanical with Impact	60.0 °C	140 °F	UL 746B
UL RTI, Mechanical without Impact	60.0 °C	140 °F	UL 746B
Flammability, UL94	V-0	V-0	UL 94
	@Thickness 1.19 mm	@Thickness 0.0469 in	

Electrical Properties	Metric	English	Comments
Volume Resistivity	$\geq 1.00 \times 10^{15}$ ohm-cm	$\geq 1.00 \times 10^{15}$ ohm-cm	IEC 60093
Surface Resistance	$\geq 1.00 \times 10^{15}$ ohm	$\geq 1.00 \times 10^{15}$ ohm	ROA; IEC 60093
Dielectric Constant	2.6	2.6	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Dielectric Strength	17.0 kV/mm	432 kV/in	in oil; IEC 60243-1
	@Thickness 3.20 mm	@Thickness 0.126 in	
Dissipation Factor	0.0041	0.0041	IEC 60250
	@Frequency 50.0 - 60.0 Hz	@Frequency 50.0 - 60.0 Hz	
Dielectric Strength	0.0086	0.0086	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	

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