SABIC Innovative Plastics Cycoloy® CY6010 PC+ABS

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

Material Notes:

Cycoloy CY6010 resin is a flame retardant PC/ABS blend featuring excellent flow together with good impact and UL-94 V0 listing at 1.5mm. Its excellent flow combined with balanced heat and good practical impact makes it an ideal candidate for a wide variety of applications.This data was supplied by SABIC-IP for the Americas region.

Order this product through the following link:
http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Cycoloy-CY6010-PCABS.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.18 g/cc	1.18 g/cc	ASTM D 792
Density	1.18 g/cc	0.0426 lb/in³	ISO 1183
Moisture Absorption at Equilibrium	0.050 %	0.050 %	23°C / 50% RH; ISO 62
Water Absorption at Saturation	0.10 % @Temperature 23.0 °C	0.10 % @Temperature 73.4 °F	ISO 62
Viscosity	100000 cP @Temperature 260 °C	100000 cP @Temperature 500 °F	melt; 1500 sec-1; ISO 11443
Linear Mold Shrinkage, Flow	0.0043 - 0.0047 cm/cm @Thickness 3.20 mm	0.0043 - 0.0047 in/in @Thickness 0.126 in	SABIC Method
Melt Flow	30 g/10 min @Load 2.16 kg, Temperature 260 °C	30 g/10 min @Load 4.76 lb, Temperature 500 °F	[cm^3/10 min] Melt Volume Rate; ISO 1133
	34 g/10 min @Load 2.16 kg, Temperature 260 °C	34 g/10 min @Load 4.76 lb, Temperature 500 °F	ASTM D 1238

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	43.0 MPa	6240 psi	50 mm/min; ISO 527
	48.0 MPa	6960 psi	Type I, 50 mm/min; ASTM D 638
Tensile Strength, Yield	63.0 MPa	9140 psi	Type I, 50 mm/min; ASTM D 638
	63.0 MPa	9140 psi	50 mm/min; ISO 527
Elongation at Break	34 %	34 %	Type I, 50 mm/min; ASTM D 638
	40 %	40 %	50 mm/min; ISO 527

Mechanical Properties	Metric	English	Comments
Elongation at Yield	4.0 %	4.0 %	Type I, 50 mm/min; ASTM D 638
	4.0 %	4.0 %	50 mm/min; ISO 527
Tensile Modulus	2.67 GPa	387 ksi	1 mm/min; ISO 527
	2.79 GPa	405 ksi	5 mm/min; ASTM D 638
Flexural Yield Strength	95.0 MPa	13800 psi	2 mm/min; ISO 178
	97.0 MPa	14100 psi	1.3 mm/min, 50 mm span; ASTM D 790
Flexural Modulus	2.63 GPa	381 ksi	1.3 mm/min, 50 mm span; ASTM D 790
	2.65 GPa	384 ksi	2 mm/min; ISO 178
Izod Impact, Notched	0.650 J/cm @Temperature -30.0 °C	1.22 ft-lb/in @Temperature -22.0 °F	ASTM D 256
	0.920 J/cm @Temperature 23.0 °C	1.72 ft-lb/in @Temperature 73.4 °F	ASTM D 256
Izod Impact, Notched (ISO)	5.00 kJ/m² @Temperature -30.0 °C	2.38 ft-lb/in² @Temperature -22.0 °F	80*10*3; ISO 180/1A
	10.0 kJ/m² @Temperature 23.0 °C	4.76 ft-lb/in² @Temperature 73.4 °F	80*10*3; ISO 180/1A
Charpy Impact, Notched	0.500 J/cm² @Temperature -30.0 °C	2.38 ft-lb/in² @Temperature -22.0 °F	V-notch Edgew 80*10*3 sp=62mm; ISO 179/1eA
	1.00 J/cm² @Temperature 23.0 °C	4.76 ft-lb/in² @Temperature 73.4 °F	V-notch Edgew 80*10*3 sp=62mm; ISO 179/1eA
Impact Test	20.0 J @Temperature 23.0 °C	14.8 ft-lb @Temperature 73.4 °F	Instrumented Impact Total Energy; ASTM D 3763

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	71.0 µm/m-°C @Temperature -40.0 - 40.0 °C	39.4 µin/in-°F @Temperature -40.0 - 104 °F	ISO 11359-2
	73.0 µm/m-°C @Temperature -40.0 - 40.0 °C	40.6 µin/in-°F @Temperature -40.0 - 104 °F	ASTM E 831
	72.0 µm/m-°C	40.0 µin/in-°F	

Thermal Properties	Metric	English	Comments
CTE, linear, Transverse to Flow	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	ISO 11359-2
	78.0 µm/m-°C @Temperature -40.0 - 40.0 °C	43.3 µin/in-°F @Temperature -40.0 - 104 °F	ASTM E 831
Deflection Temperature at 1.8 MPa (264 psi)	73.0 °C	163 °F	Flatw 80*10*4 sp=64mm; ISO 75/Af
	81.0 °C @Thickness 3.20 mm	178 °F @Thickness 0.126 in	unannealed; ASTM D 648
Vicat Softening Point	88.0 °C	190 °F	Rate B/50; ISO 306
	92.0 °C	198 °F	Rate B/120; ISO 306
Flammability, UL94	V-1 @Thickness 1.00 mm	V-1 @Thickness 0.0394 in	UL 94 by SABIC-IP
	V-0 @Thickness 1.50 mm	V-0 @Thickness 0.0591 in	UL 94 by SABIC-IP

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