SABIC Innovative Plastics Cycoloy® CY5100 PC+ABS (Asia Pacific)

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

Material Notes:

CY5100 is a Flame retardant PC blend using non-brominated and non-chlorinated flame retardant systems, offering excellent flow / impact balance for large size applications

Order this product through the following link:
http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Cycoloy-CY5100-PCABS-Asia-Pacific.php

Physical Properties	Metric	English	Comments
Density	1.18 g/cc	0.0426 lb/in³	ISO 1183
Moisture Absorption	0.200 %	0.200 %	23°C / 50% RH; ISO 62
Water Absorption at Saturation	0.60 %	0.60 %	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 Index of Compound	23 g/10 min @Load 2.16 kg, Temperature 260 °C	23 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	46.0 MPa	6670 psi	50 mm/min; ISO 527
	47.0 MPa	6820 psi	Type I, 50 mm/min; ASTM D638
Tensile Strength, Yield	63.0 MPa	9140 psi	50 mm/min; ISO 527
	63.0 MPa	9140 psi	Type I, 50 mm/min; ASTM D638
Elongation at Break	35 %	35 %	50 mm/min; ISO 527
	65 %	65 %	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	2.75 GPa	399 ksi	1 mm/min; ISO 527
	2.76 GPa	400 ksi	5 mm/min; ASTM D638
Flexural Yield Strength	94.0 MPa	13600 psi	2 mm/min; ISO 178
Flexural Modulus	2.44 GPa	354 ksi	2 mm/min; ISO 178
Izod Impact, Notched			ASTM D256

Mechanical Properties	Metric	English	Comments
	4.00 J/cm	7.49 ft-lb/in	
	0.800 J/cm @Temperature -30.0 °C	1.50 ft-lb/in @Temperature -22.0 °F	ASTM D256
Izod Impact, Notched (ISO)	45.0 kJ/m²	21.4 ft-lb/in²	80*10*3; ISO 180/1A
	10.0 kJ/m² @Temperature -30.0 °C	4.76 ft-lb/in² @Temperature -22.0 °F	80*10*3; ISO 180/1A
Charpy Impact, Notched	4.50 J/cm²	21.4 ft-lb/in²	Edgew 80*10*3 sp=62mm; ISO 179/1eA
	1.00 J/cm² @Temperature -30.0 °C	4.76 ft-lb/in² @Temperature -22.0 °F	Edgew 80*10*3 sp=62mm; ISO 179/1eA

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	80.0 µm/m-°C @Temperature -40.0 - 40.0 °C	44.4 µin/in-°F @Temperature -40.0 - 104 °F	ISO 11359-2
CTE, linear, Transverse to Flow	80.0 µm/m-°C @Temperature -40.0 - 40.0 °C	44.4 µin/in-°F @Temperature -40.0 - 104 °F	ISO 11359-2
Deflection Temperature at 1.8 MPa (264 psi)	88.0 °C	190 °F	Flatw 80*10*4 sp=64mm; ISO 75/Af
Vicat Softening Point	104 °C	219 °F	Rate B/50; ISO 306
	106 °C	223 °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-1 @Thickness 1.50 mm	V-1 @Thickness 0.0591 in	UL 94
	V-0 @Thickness 2.00 mm	V-0 @Thickness 0.0787 in	UL 94
Oxygen Index	31 %	31 %	ISO 4589
Glow Wire Test	825 °C	1520 °F	IEC 60695-2-13
	825 °C	1520 °F	IEC 60695-2-13
	825 °C	1520 °F	IEC 60695-2-13

Thermal Properties	Metric	English	Comments
	350 °C @Thickness 1.00 mm	1750 °F @Thickness 0.0394 in	IEC 60695-2-12

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 Constant	2.9 @Frequency 1.00e+6 Hz	2.9 @Frequency 1.00e+6 Hz	IEC 60250
	2.9 @Frequency 50.0 - 60.0 Hz	2.9 @Frequency 50.0 - 60.0 Hz	IEC 60250
Dielectric Strength	31.0 kV/mm @Thickness 1.60 mm	787 kV/in @Thickness 0.0630 in	in oil; IEC 60243-1
	46.0 kV/mm @Thickness 0.800 mm	1170 kV/in @Thickness 0.0315 in	in oil; IEC 60243-1
Dissipation Factor	0.0020 @Frequency 50.0 - 60.0 Hz	0.0020 @Frequency 50.0 - 60.0 Hz	IEC 60250
	0.0070 @Frequency 1.00e+6 Hz	0.0070 @Frequency 1.00e+6 Hz	IEC 60250
Comparative Tracking Index	250 - 400 V	250 - 400 V	UL 746A
Hot Wire Ignition, HWI	15 - 30 sec	15 - 30 sec	UL 746A

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

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