

SABIC Innovative Plastics Cycology® CY5000 PC+ABS

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

Material Notes:

Flame retardant PC/ABS blend using non-brominated and non-chlorinated flame retardant systems, offering hydrolytic stability and excellent flow for a wide variety of thin wall or large size applications including business equipment, TV enclosures, among others

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Cycology-CY5000-PCABS.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.18 g/cc	1.18 g/cc	ASTM D792
Density	1.18 g/cc	0.0426 lb/in ³	ISO 1183
Moisture Absorption	0.0500 %	0.0500 %	23°C / 50% RH; ISO 62
Water Absorption at Saturation	0.10 %	0.10 %	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	34 g/10 min @Load 2.16 kg, Temperature 260 °C	34 g/10 min @Load 4.76 lb, Temperature 500 °F	ASTM D1238
Melt Index of Compound	30 g/10 min @Load 2.16 kg, Temperature 260 °C	30 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	43.0 MPa	6240 psi	50 mm/min; ISO 527
	48.0 MPa	6960 psi	Type I, 50 mm/min; ASTM D638
Tensile Strength, Yield	63.0 MPa	9140 psi	50 mm/min; ISO 527
	65.0 MPa	9430 psi	Type I, 50 mm/min; ASTM D638
Elongation at Break	34 %	34 %	Type I, 50 mm/min; ASTM D638
	40 %	40 %	50 mm/min; ISO 527
Elongation at Yield	3.5 %	3.5 %	50 mm/min; ISO 527
	3.9 %	3.9 %	Type I, 50 mm/min; ASTM D638
Tensile Modulus	2.67 GPa	387 ksi	1 mm/min; ISO 527

Mechanical Properties	2.80 GPa Metric	406 ksi English	5 mm/min: ASTM D638 Comments
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 D790
Flexural Modulus	2.63 GPa	381 ksi	1.3 mm/min, 50 mm span; ASTM D790
	2.70 GPa	392 ksi	2 mm/min; ISO 178
Izod Impact, Notched	0.900 J/cm	1.69 ft-lb/in	ASTM D256
	0.690 J/cm	1.29 ft-lb/in	ASTM D256
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Izod Impact, Notched (ISO)	10.0 kJ/m ²	4.76 ft-lb/in ²	80*10*3; ISO 180/1A
	5.00 kJ/m ²	2.38 ft-lb/in ²	80*10*3; ISO 180/1A
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Charpy Impact, Notched	1.00 J/cm ²	4.76 ft-lb/in ²	Edgew 80*10*3 sp=62mm; ISO 179/1eA
	0.500 J/cm ²	2.38 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	20.0 J	14.8 ft-lb	ASTM D3763
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	71.0 µm/m-°C	39.4 µin/in-°F	ISO 11359-2
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	
	73.0 µm/m-°C	40.6 µin/in-°F	ASTM E 831
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	
CTE, linear, Transverse to Flow	72.0 µm/m-°C	40.0 µin/in-°F	ISO 11359-2
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	
	78.0 µm/m-°C	43.3 µin/in-°F	ASTM E 831
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	
Deflection Temperature at 1.8 MPa (264 psi)	73.0 °C	163 °F	Flatw 80*10*4 sp=64mm; ISO 75/ Af

Thermal Properties	81.0 °C Metric	178 °F English	Comments
	@Thickness 6.40 mm	@Thickness 0.252 in	UL 94;ASTM D648
Vicat Softening Point	89.0 °C	192 °F	Rate B/50; ISO 306
	92.0 °C	198 °F	Rate B/120; ISO 306
Flammability, UL94	V-1	V-1	UL 94
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	V-0	V-0	UL 94
	@Thickness 2.00 mm	@Thickness 0.0787 in	

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