

SABIC Innovative Plastics Cycology® CH6410 PC+ABS

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

Material Notes:

CH6410 is a high heat, impact modified PC resin, with nonbrominated, nonchlorinated flame retardant system. Limited colors only.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Cycology-CH6410-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
Linear Mold Shrinkage, Flow	0.00050 - 0.00070 cm/cm	0.00050 - 0.00070 in/in	on Tensile Bar; SABIC Method
	0.0040 - 0.0050 cm/cm @Thickness 3.20 mm	0.0040 - 0.0050 in/in @Thickness 0.126 in	SABIC Method
Melt Flow	6.3 g/10 min	6.3 g/10 min	ASTM D1238
	@Load 2.16 kg, Temperature 260 °C	@Load 4.76 lb, Temperature 500 °F	
Melt Index of Compound	16 g/10 min	16 g/10 min	MVR [cm ³ /10 min]; ISO 1133
	@Load 5.00 kg, Temperature 260 °C	@Load 11.0 lb, Temperature 500 °F	

Mechanical Properties	Metric	English	Comments
Hardness, H358/30	100 MPa	14500 psi	ISO 2039-1
Tensile Strength at Break	54.0 MPa	7830 psi	Type I, 50 mm/min; ASTM D638
	55.0 MPa	7980 psi	50 mm/min; ISO 527
Tensile Strength, Yield	63.0 MPa	9140 psi	Type I, 50 mm/min; ASTM D638
	63.0 MPa	9140 psi	50 mm/min; ISO 527
Elongation at Break	88 %	88 %	Type I, 50 mm/min; ASTM D638
	95 %	95 %	50 mm/min; ISO 527
Elongation at Yield	5.0 %	5.0 %	50 mm/min; ISO 527
	5.5 %	5.5 %	Type I, 50 mm/min; ASTM D638
Tensile Modulus	2.30 GPa	334 ksi	1 mm/min; ISO 527
	2.54 GPa	368 ksi	50 mm/min; ASTM D638

Mechanical Properties	Metric	English	Comments
Flexural Yield Strength	90.0 MPa	13000 psi	2 mm/min; ISO 178
	95.0 MPa	13800 psi	1.3 mm/min, 50 mm span; ASTM D790
Flexural Modulus	2.40 GPa	348 ksi	2 mm/min; ISO 178
	2.59 GPa	376 ksi	1.3 mm/min, 50 mm span; ASTM D790
Izod Impact, Notched	9.07 J/cm	17.0 ft-lb/in	ASTM D256
Izod Impact, Notched (ISO)	50.0 kJ/m ²	23.8 ft-lb/in ²	80*10*4; ISO 180/1A
	15.0 kJ/m ²	7.14 ft-lb/in ²	80*10*4; ISO 180/1A
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	19.0 kJ/m ²	9.04 ft-lb/in ²	80*10*4; ISO 180/1A
	@Temperature 0.000 °C	@Temperature 32.0 °F	
Charpy Impact, Notched	5.50 J/cm ²	26.2 ft-lb/in ²	Edgew 80*10*4 sp=62mm; ISO 179/1eA
	1.50 J/cm ²	7.14 ft-lb/in ²	Edgew 80*10*4 sp=62mm; ISO 179/1eA
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Dart Drop, Total Energy	72.0 J	53.1 ft-lb	ASTM D3763
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	70.0 µm/m-°C	38.9 µin/in-°F	ISO 11359-2
	@Temperature 23.0 - 60.0 °C	@Temperature 73.4 - 140 °F	
	77.4 µm/m-°C	43.0 µin/in-°F	ASTM E 831
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	
CTE, linear, Transverse to Flow	59.4 µm/m-°C	33.0 µin/in-°F	ASTM E 831
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	
	70.0 µm/m-°C	38.9 µin/in-°F	ISO 11359-2
	@Temperature 23.0 - 60.0 °C	@Temperature 73.4 - 140 °F	
Deflection Temperature at 0.46 MPa (66 psi)	126 °C	259 °F	Edgew 120*10*4 sp=100mm; ISO 75/Be
	127 °C	261 °F	

Thermal Properties	Metric @ Thickness 3.20 mm	English @ Thickness 0.126 in	unannealed; ASTM D648 Comments
Deflection Temperature at 1.8 MPa (264 psi)	113 °C	235 °F	Edgew 120*10*4 sp=100mm; ISO 75/Ae
	118 °C @Thickness 3.20 mm	244 °F @Thickness 0.126 in	unannealed; ASTM D648
Vicat Softening Point	134 °C	273 °F	Rate B/50; ISO 306
	135 °C	275 °F	Rate B/120; ISO 306
Flammability, UL94	V-1 @Thickness 0.990 mm	V-1 @Thickness 0.0390 in	UL 94
	V-0 @Thickness 1.49 mm	V-0 @Thickness 0.0587 in	UL 94

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	2.7 @Frequency 1.00e+6 Hz	2.7 @Frequency 1.00e+6 Hz	IEC 60250
	2.7 @Frequency 50.0 - 60.0 Hz	2.7 @Frequency 50.0 - 60.0 Hz	IEC 60250
Dielectric Strength	18.0 kV/mm @Thickness 3.20 mm	457 kV/in @Thickness 0.126 in	in oil; IEC 60243-1
Dissipation Factor	0.0010 @Frequency 50.0 - 60.0 Hz	0.0010 @Frequency 50.0 - 60.0 Hz	IEC 60250
	0.010 @Frequency 1.00e+6 Hz	0.010 @Frequency 1.00e+6 Hz	IEC 60250
Comparative Tracking Index	225 V	225 V	IEC 60112

Descriptive Properties	Value	Comments
Ball Pressure Test, 125°C +/- 2°C	PASSES	IEC 60695-10-2

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