

SABIC Innovative Plastics Cycology® C6840 PC+ABS (Europe-Africa-Middle East)

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

Material Notes:

Cycology* C6840 resin is an injection moldable, flame retardant PC/ABS blend. It contains non-chlorinated & non-brominated flame retardant systems intended to meet governmental regulations and various voluntary environmental labels. Key features of Cycology C6840 resin including very good flow, balanced impact property, heat resistance, hydrolytic stability and all color options make this grade an ideal candidate for thin wall applications. This data was supplied by SABIC-IP for the Europe-Africa-Middle East region.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Cycology-C6840-PCABS-Europe-Africa-Middle-East.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.18 g/cc	1.18 g/cc	ASTM D 792
Density	1.19 g/cc	0.0430 lb/in ³	ISO 1183
Moisture Absorption at Equilibrium	0.10 %	0.10 %	23°C / 50% RH; ISO 62
Water Absorption at Saturation	0.20 % @Temperature 23.0 °C	0.20 % @Temperature 73.4 °F	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	23 g/10 min @Load 2.16 kg, Temperature 260 °C	23 g/10 min @Load 4.76 lb, Temperature 500 °F	[cm ³ /10 min] Melt Volume Rate; ISO 1133
	26 g/10 min @Load 2.16 kg, Temperature 260 °C	26 g/10 min @Load 4.76 lb, Temperature 500 °F	ASTM D 1238

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	40.0 MPa	5800 psi	Type I, 50 mm/min; ASTM D 638
	44.0 MPa	6380 psi	50 mm/min; ISO 527
Tensile Strength, Yield	55.0 MPa	7980 psi	Type I, 50 mm/min; ASTM D 638
	56.0 MPa	8120 psi	50 mm/min; ISO 527
Elongation at Break	51 %	51 %	Type I, 50 mm/min; ASTM D 638
	60 %	60 %	50 mm/min; ISO 527

Elongation at Yield Mechanical Properties	3.6 % Metric	3.6 % English	Type I, 50 mm/min; ASTM D 638 Comments
	4.0 %	4.0 %	50 mm/min; ISO 527
Tensile Modulus	2.50 GPa	363 ksi	1 mm/min; ISO 527
	2.58 GPa	374 ksi	5 mm/min; ASTM D 638
Flexural Strength	90.0 MPa	13100 psi	2 mm/min; ISO 178
Flexural Yield Strength	92.0 MPa	13300 psi	1.3 mm/min, 50 mm span; ASTM D 790
Flexural Modulus	2.50 GPa	363 ksi	1.3 mm/min, 50 mm span; ASTM D 790
	2.60 GPa	377 ksi	2 mm/min; ISO 178
Izod Impact, Notched	1.10 J/cm @Temperature -30.0 °C	2.06 ft-lb/in @Temperature -22.0 °F	ASTM D 256
	5.00 J/cm @Temperature 23.0 °C	9.37 ft-lb/in @Temperature 73.4 °F	ASTM D 256
Izod Impact, Notched (ISO)	10.0 kJ/m ² @Temperature -30.0 °C	4.76 ft-lb/in ² @Temperature -22.0 °F	80*10*3; ISO 180/1A
	15.0 kJ/m ² @Temperature 23.0 °C	7.14 ft-lb/in ² @Temperature 73.4 °F	80*10*3; ISO 180/1A
Charpy Impact, Notched	1.00 J/cm ² @Temperature -30.0 °C	4.76 ft-lb/in ² @Temperature -22.0 °F	V-notch Edgew 80*10*3 sp=62mm; ISO 179/1eA
	1.50 J/cm ² @Temperature 23.0 °C	7.14 ft-lb/in ² @Temperature 73.4 °F	V-notch Edgew 80*10*3 sp=62mm; ISO 179/1eA
Impact Test	40.0 J @Temperature 23.0 °C	29.5 ft-lb @Temperature 73.4 °F	Instrumented Impact Total Energy; ASTM D 3763

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	60.0 µm/m-°C @Temperature -40.0 - 40.0 °C	33.3 µin/in-°F @Temperature -40.0 - 104 °F	ASTM E 831
	75.0 µm/m-°C @Temperature -40.0 - 40.0 °C	41.7 µin/in-°F @Temperature -40.0 - 104 °F	ISO 11359-2
	60.0 µm/m-°C	33.3 µin/in-°F	

CTE, linear, Transverse to Flow Thermal Properties	Metric @ Temperature -40.0 - 40.0 °C	English @ Temperature -40.0 - 104 °F	ASTM E 831 Comments
	75.0 µm/m-°C	41.7 µin/in-°F	ISO 11359-2
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	
Thermal Conductivity	0.200 W/m-K	1.39 BTU-in/hr-ft²-°F	ISO 8302
Deflection Temperature at 0.46 MPa (66 psi)	89.0 °C	192 °F	unannealed; ASTM D 648
	@Thickness 3.20 mm	@Thickness 0.126 in	
Deflection Temperature at 1.8 MPa (264 psi)	78.0 °C	172 °F	Edgew 120*10*4 sp=100mm; ISO 75/Ae
	85.0 °C	185 °F	unannealed; ASTM D 648
	@Thickness 6.40 mm	@Thickness 0.252 in	
Vicat Softening Point	93.0 °C	199 °F	Rate B/50; ASTM D 1525
	93.0 °C	199 °F	Rate B/50; ISO 306
	96.0 °C	205 °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 1.50 mm	@Thickness 0.0591 in	
	5VB	5VB	UL 94
	@Thickness 2.00 mm	@Thickness 0.0787 in	

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 Strength	17.0 kV/mm	432 kV/in	in oil; IEC 60243-1
	@Thickness 3.20 mm	@Thickness 0.126 in	
	25.0 kV/mm	635 kV/in	in oil; IEC 60243-1
	@Thickness 1.60 mm	@Thickness 0.0630 in	
	35.0 kV/mm	889 kV/in	in oil; IEC 60243-1
	@Thickness 0.800 mm	@Thickness 0.0315 in	

Electrical Properties	Metric	English	Comments
Descriptive Properties		Value	Comments
Ball Pressure Test, 75°C +/- 2°C		PASSES	IEC 60695-10-2

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