

SABIC Innovative Plastics Cycology® C6800 PC+ABS

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

Material Notes:

PC+ABS, nonchlorinated, nonbrominated flame retardant. 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-Cycology-C6800-PCABS.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.18 g/cc	1.18 g/cc	color; ASTM D 792
	1.19 g/cc	1.19 g/cc	ASTM D 792
Water Absorption	0.10 %	0.10 %	ASTM D 570
	@Time 86400 sec	@Time 24.0 hour	
Moisture Absorption at Equilibrium	0.40 %	0.40 %	ASTM D 570
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Linear Mold Shrinkage, Flow	0.0040 - 0.0060 cm/cm	0.0040 - 0.0060 in/in	SABIC Method
	@Thickness 3.20 mm	@Thickness 0.126 in	
Linear Mold Shrinkage, Transverse	0.0040 - 0.0060 cm/cm	0.0040 - 0.0060 in/in	SABIC Method
	@Thickness 3.20 mm	@Thickness 0.126 in	
Melt Flow	11 g/10 min	11 g/10 min	ASTM D 1238
	@Load 2.16 kg, Temperature 260 °C	@Load 4.76 lb, Temperature 500 °F	

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	120	120	ASTM D 785
Tensile Strength, Yield	62.0 MPa	8990 psi	Type I, 50 mm/min; ASTM D 638
Elongation at Break	50 %	50 %	Type I, 50 mm/min; ASTM D 638
Elongation at Yield	5.0 %	5.0 %	Type I, 50 mm/min; ASTM D 638
Tensile Modulus	2.68 GPa	389 ksi	50 mm/min; ASTM D 638
Flexural Yield Strength	103 MPa	14900 psi	1.3 mm/min, 50 mm span; ASTM D 790
Flexural Modulus	2.68 GPa	389 ksi	1.3 mm/min, 50 mm span; ASTM D 790
Izod Impact, Notched	5.87 J/cm	11.0 ft-lb/in	ASTM D 256

Mechanical Properties	@Temperature 23.0 °C Metric	@Temperature 73.4 °F English	Comments
Impact Test	67.0 J	49.4 ft-lb	Instrumented Impact Total Energy; ASTM D 3763
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	72.0 µm/m-°C	40.0 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	ASTM E 831
	@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	ASTM C 177
Deflection Temperature at 0.46 MPa (66 psi)	109 °C	228 °F	unannealed; ASTM D 648
	@Thickness 3.20 mm	@Thickness 0.126 in	
Deflection Temperature at 1.8 MPa (264 psi)	98.0 °C	208 °F	unannealed; ASTM D 648
	@Thickness 3.20 mm	@Thickness 0.126 in	
UL RTI, Electrical	90.0 °C	194 °F	UL 746B
UL RTI, Mechanical with Impact	85.0 °C	185 °F	UL 746B
UL RTI, Mechanical without Impact	90.0 °C	194 °F	UL 746B
Flammability, UL94	V-1	V-1	UL 94
	@Thickness 1.47 mm	@Thickness 0.0579 in	
	V-0	V-0	UL 94
	@Thickness 2.00 mm	@Thickness 0.0787 in	
	5VB	5VB	UL 94
	@Thickness 2.59 mm	@Thickness 0.102 in	

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+17 ohm-cm	1.00e+17 ohm-cm	ASTM D 257
Surface Resistance	>= 1.00e+14 ohm	>= 1.00e+14 ohm	ASTM D 257
Dielectric Constant	3.0	3.0	ASTM D 150
	@Frequency 50.0 - 60.0 Hz	@Frequency 50.0 - 60.0 Hz	
	3.0	3.0	

Electrical Properties	Metric @Frequency 100 Hz	English @Frequency 100 Hz	ASTM D 150 Comments
Dielectric Strength	17.9 kV/mm @Thickness 3.20 mm	455 kV/in @Thickness 0.126 in	in oil; ASTM D 149
Dissipation Factor	0.0048 @Frequency 50.0 - 60.0 Hz	0.0048 @Frequency 50.0 - 60.0 Hz	ASTM D 150
Comparative Tracking Index	>= 600 V	>= 600 V	PLC code 0; UL 746A
Hot Wire Ignition, HWI	30 - 60 sec	30 - 60 sec	PLC code 2; UL 746A
High Amp Arc Ignition, HAI	>= 120 arcs	>= 120 arcs	surface, PLC code 0; UL 746A

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