

SABIC Innovative Plastics Cycology® CX7211 PC+ABS

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

Material Notes:

Cycology* CX7211 PC/ABS resin is a non-filled, injection moldable grade which has UL 94 rating at 2.5 mm 5VA. Cycology CX7211 resin provides all color options and features an excellent balance of flow, impact and heat properties, which makes it an excellent candidate for thin wall applications.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Cycology-CX7211-PCABS.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.18 g/cc	1.18 g/cc	ASTM D792
Density	1.19 g/cc	0.0430 lb/in ³	ISO 1183
Moisture Absorption	0.120 %	0.120 %	23°C / 50% RH; ISO 62
Water Absorption at Saturation	0.24 %	0.24 %	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	15.5 g/10 min @Load 2.16 kg, Temperature 260 °C	15.5 g/10 min @Load 4.76 lb, Temperature 500 °F	ASTM D1238
Melt Index of Compound	14 g/10 min @Load 2.16 kg, Temperature 260 °C	14 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	55.0 MPa	7980 psi	50 mm/min; ISO 527
	60.0 MPa	8700 psi	Type I, 50 mm/min; ASTM D638
Tensile Strength, Yield	62.0 MPa	8990 psi	50 mm/min; ISO 527
	66.0 MPa	9570 psi	Type I, 50 mm/min; ASTM D638
Elongation at Break	90 %	90 %	50 mm/min; ISO 527
	98 %	98 %	Type I, 50 mm/min; ASTM D638
Elongation at Yield	4.0 %	4.0 %	Type I, 50 mm/min; ASTM D638
	4.0 %	4.0 %	50 mm/min; ISO 527
Tensile Modulus	2.80 GPa	406 ksi	1 mm/min; ISO 527

Mechanical Properties	Metric 2.95 GPa	English 428 ksi	Comments 5 mm/min; ASTM D638
Flexural Yield Strength	100 MPa	14500 psi	2 mm/min; ISO 178
	103 MPa	14900 psi	1.3 mm/min, 50 mm span; ASTM D790
Flexural Modulus	2.50 GPa	363 ksi	2 mm/min; ISO 178
	2.75 GPa	399 ksi	1.3 mm/min, 50 mm span; ASTM D790
Izod Impact, Notched	6.25 J/cm	11.7 ft-lb/in	ASTM D256
	1.25 J/cm	2.34 ft-lb/in	ASTM D256
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Izod Impact, Notched (ISO)	40.0 kJ/m ²	19.0 ft-lb/in ²	80*10*3; ISO 180/1A
	10.0 kJ/m ²	4.76 ft-lb/in ²	80*10*3; ISO 180/1A
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Charpy Impact, Notched	4.00 J/cm ²	19.0 ft-lb/in ²	Edgew 80*10*3 sp=62mm; ISO 179/1eA
	1.00 J/cm ²	4.76 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	60.0 J	44.3 ft-lb	ASTM D3763
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	61.4 µm/m-°C	34.1 µin/in-°F	ASTM E 831
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	
	75.0 µm/m-°C	41.7 µin/in-°F	ISO 11359-2
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	
CTE, linear, Transverse to Flow	55.1 µm/m-°C	30.6 µin/in-°F	ASTM E 831
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	
	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-ft ² -°F	ISO 8302

Thermal Properties	Metric	English	Comments
Deflection Temperature at 0.46 MPa (66 psi)	94.0 °C @Thickness 3.20 mm	201 °F @Thickness 0.126 in	unannealed; ASTM D648
	102 °C @Thickness 6.40 mm	216 °F @Thickness 0.252 in	unannealed; ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	90.0 °C	194 °F	Flatw 80*10*4 sp=64mm; ISO 75/Af
	89.0 °C @Thickness 3.20 mm	192 °F @Thickness 0.126 in	unannealed; ASTM D648
	96.0 °C @Thickness 6.40 mm	205 °F @Thickness 0.252 in	unannealed; ASTM D648
Vicat Softening Point	105 °C	221 °F	Rate B/50; ASTM D1525
	105 °C	221 °F	Rate B/50; ISO 306
	105 °C	221 °F	Rate B/120; ISO 306
UL RTI, Electrical	90.0 °C	194 °F	UL 746B
UL RTI, Mechanical with Impact	90.0 °C	194 °F	UL 746B
UL RTI, Mechanical without Impact	90.0 °C	194 °F	UL 746B
Flammability, UL94	V-1 @Thickness 1.25 mm	V-1 @Thickness 0.0492 in	UL 94
	V-0 @Thickness 1.50 mm	V-0 @Thickness 0.0591 in	UL 94
	5VB @Thickness 2.00 mm	5VB @Thickness 0.0787 in	UL 94
	5VA @Thickness 2.50 mm	5VA @Thickness 0.0984 in	UL 94
Oxygen Index	32 %	32 %	ISO 4589
Glow Wire Test	800 °C	1470 °F	IEC 60695-2-13
	800 °C	1470 °F	IEC 60695-2-13
	960 °C @Thickness 1.00 mm	1760 °F @Thickness 0.0394 in	IEC 60695-2-12

Electrical Properties	Metric	English	Comments
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Electrical Properties	Metric	English	Comments
Surface Resistance	$\geq 1.00 \times 10^{15}$ ohm-cm	$\geq 1.00 \times 10^{15}$ 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	
Comparative Tracking Index	175 - 250 V	175 - 250 V	UL 746A
Hot Wire Ignition, HWI	30 - 60 sec	30 - 60 sec	UL 746A
High Amp Arc Ignition, HAI	≥ 120 arcs	≥ 120 arcs	UL 746A

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

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