

SABIC Innovative Plastics Cycology® CE1821 PC+ABS

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

Material Notes:

High stiffness PC/ABS blend offering high impact, high heat, low CTE, good surface quality and excellent extrusion and thermoforming characteristics.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Cycology-CE1821-PCABS.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.22 g/cc	1.22 g/cc	ASTM D792
Density	1.22 g/cc	0.0441 lb/in ³	ISO 1183
Moisture Absorption	0.100 %	0.100 %	23°C / 50% RH; ISO 62
Water Absorption at Saturation	0.40 %	0.40 %	ISO 62
Linear Mold Shrinkage, Flow	0.0050 - 0.0070 cm/cm @Thickness 3.20 mm	0.0050 - 0.0070 in/in @Thickness 0.126 in	SABIC Method
Melt Flow	12 g/10 min @Load 5.00 kg, Temperature 260 °C	12 g/10 min @Load 11.0 lb, Temperature 500 °F	ASTM D1238
Melt Index of Compound	10 g/10 min @Load 5.00 kg, Temperature 260 °C	10 g/10 min @Load 11.0 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	Type I, 5 mm/min; ASTM D638
	55.0 MPa	7980 psi	5 mm/min; ISO 527
Tensile Strength, Yield	60.0 MPa	8700 psi	Type I, 5 mm/min; ASTM D638
	60.0 MPa	8700 psi	5 mm/min; ISO 527
Elongation at Break	110 %	110 %	Type I, 5 mm/min; ASTM D638
	110 %	110 %	5 mm/min; ISO 527
Elongation at Yield	5.0 %	5.0 %	Type I, 5 mm/min; ASTM D638
	5.0 %	5.0 %	5 mm/min; ISO 527
Tensile Modulus	3.10 GPa	450 ksi	5 mm/min; ASTM D638

Mechanical Properties	3.10 GPa Metric	450 ksi English	1 mm/min; ISO 527 Comments
Flexural Yield Strength	95.0 MPa	13800 psi	1.3 mm/min, 50 mm span; ASTM D790
	95.0 MPa	13800 psi	2 mm/min; ISO 178
Flexural Modulus	3.00 GPa	435 ksi	1.3 mm/min, 50 mm span; ASTM D790
	3.00 GPa	435 ksi	2 mm/min; ISO 178
Izod Impact, Notched	5.00 J/cm	9.37 ft-lb/in	ASTM D256
	1.20 J/cm	2.25 ft-lb/in	ASTM D256
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Izod Impact, Notched (ISO)	45.0 kJ/m ²	21.4 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	4.50 J/cm ²	21.4 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	65.0 J	47.9 ft-lb	ASTM D3763
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	60.0 µm/m-°C	33.3 µin/in-°F	ASTM E 831
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	
	60.0 µm/m-°C	33.3 µin/in-°F	ISO 11359-2
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	
CTE, linear, Transverse to Flow	70.0 µm/m-°C	38.9 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 -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
Deflection Temperature at 1.8 MPa			

(264 psi) Thermal Properties	120 °C Metric	248 °F English	Flatw 80*10*4 sp=64mm; ISO 75/Af Comments
	120 °C	248 °F	unannealed; ASTM D648
	@Thickness 3.20 mm	@Thickness 0.126 in	
Vicat Softening Point	138 °C	280 °F	Rate B/50; ASTM D1525
	138 °C	280 °F	Rate B/50; ISO 306
	140 °C	284 °F	Rate B/120; ISO 306

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

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