

SABIC Innovative Plastics Cycloy® XCM850 PC+ABS

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

Material Notes:

Reinforced PC/ABS with high stiffness and low CTE.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Cycloy-XCM850-PCABS.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.30 g/cc	1.30 g/cc	ASTM D792
Density	1.30 g/cc	0.0470 lb/in ³	ISO 1183
Moisture Absorption	0.0500 %	0.0500 %	23°C / 50% RH; ISO 62
Water Absorption at Saturation	0.20 %	0.20 %	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	7.0 g/10 min @Load 5.00 kg, Temperature 260 °C	7.0 g/10 min @Load 11.0 lb, Temperature 500 °F	ASTM D1238
Melt Index of Compound	6.0 g/10 min @Load 5.00 kg, Temperature 260 °C	6.0 g/10 min @Load 11.0 lb, Temperature 500 °F	MVR [cm ³ /10 min]; ISO 1133
	24 g/10 min @Load 5.00 kg, Temperature 300 °C	24 g/10 min @Load 11.0 lb, Temperature 572 °F	MVR [cm ³ /10 min]; ISO 1133

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	45.0 MPa	6530 psi	Type I, 5 mm/min; ASTM D638
	45.0 MPa	6530 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	15 %	15 %	Type I, 5 mm/min; ASTM D638
	15 %	15 %	5 mm/min; ISO 527
Elongation at Yield	4.0 %	4.0 %	Type I, 5 mm/min; ASTM D638
	4.0 %	4.0 %	5 mm/min; ISO 527

Mechanical Properties	Metric Pa	English	Comments ASTM D638
	4.65 GPa	674 ksi	1 mm/min; ISO 527
Flexural Yield Strength	105 MPa	15200 psi	1.3 mm/min, 50 mm span; ASTM D790
	105 MPa	15200 psi	2 mm/min; ISO 178
Flexural Modulus	4.45 GPa	645 ksi	1.3 mm/min, 50 mm span; ASTM D790
	4.45 GPa	645 ksi	2 mm/min; ISO 178
Izod Impact, Notched	1.70 J/cm	3.18 ft-lb/in	ASTM D256
	0.900 J/cm	1.69 ft-lb/in	ASTM D256
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Izod Impact, Notched (ISO)	20.0 kJ/m ²	9.52 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	2.00 J/cm ²	9.52 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	43.0 µm/m-°C	23.9 µin/in-°F	ASTM E 831
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	
	43.0 µm/m-°C	23.9 µin/in-°F	ISO 11359-2
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	
CTE, linear, Transverse to Flow	59.0 µm/m-°C	32.8 µin/in-°F	ASTM E 831
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	
	59.0 µm/m-°C	32.8 µin/in-°F	ISO 11359-2
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	

Thermal Conductivity Thermal Properties	0.200 W/m-K Metric	1.39 BTU-in/hr-ft ² -F English	ISO 8302 Comments
Deflection Temperature at 1.8 MPa (264 psi)	122 °C	252 °F	Flatw 80*10*4 sp=64mm; ISO 75/Af
	121 °C @Thickness 3.20 mm	250 °F @Thickness 0.126 in	unannealed; ASTM D648
Vicat Softening Point	139 °C	282 °F	Rate B/50; ASTM D1525
	139 °C	282 °F	Rate B/50; ISO 306
	141 °C	286 °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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