SABIC Innovative Plastics Cycoloy® XCY620 PC+ABS (Asia Pacific)

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

Material Notes:

PC+ ABS Automotive applications, High Impact and High Flow, ductility at low temperature, excellent properties retention after Hydrolytic and Heat Aging

Order this product through the following link:
http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Cycoloy-XCY620-PCABS-Asia-Pacific.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.14 g/cc	1.14 g/cc	ASTM D792
Density	1.14 g/cc	0.0412 lb/in³	ISO 1183
Moisture Absorption	0.150 %	0.150 %	23°C / 50% RH; ISO 62
Water Absorption at Saturation	0.40 %	0.40 %	ISO 62
Viscosity	195000 cP	195000 cP	Melt Viscosity, 260°C, 1500 sec-1; ISO 11443
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
Linear Mold Shrinkage, Transverse	0.0050 - 0.0070 cm/cm @Thickness 3.20 mm	0.0050 - 0.0070 in/in @Thickness 0.126 in	SABIC Method
Melt Flow	22 g/10 min @Load 5.00 kg, Temperature 260 °C	22 g/10 min @Load 11.0 lb, Temperature 500 °F	ASTM D1238
Melt Index of Compound	18 g/10 min @Load 5.00 kg, Temperature 260 °C	18 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	51.0 MPa	7400 psi	50 mm/min; ISO 527
	52.0 MPa	7540 psi	Type I, 50 mm/min; ASTM D638
Tensile Strength, Yield	54.0 MPa	7830 psi	50 mm/min; ISO 527
	55.0 MPa	7980 psi	Type I, 50 mm/min; ASTM D638
Elongation at Break	115 %	115 %	Type I, 50 mm/min; ASTM D638
	115 %	115 %	50 mm/min; ISO 527

Mechanical Properties	Metric	English	Comments
Elongation at Yield	4.5 %	4.5 %	50 mm/min; ISO 527
	4.7 %	4.7 %	Type I, 50 mm/min; ASTM D638
Tensile Modulus	2.20 GPa	319 ksi	1 mm/min; ISO 527
	2.30 GPa	334 ksi	5 mm/min; ASTM D638
Flexural Yield Strength	83.0 MPa	12000 psi	2 mm/min; ISO 178
	89.0 MPa	12900 psi	1.3 mm/min, 50 mm span; ASTM D790
Flexural Modulus	2.20 GPa	319 ksi	2 mm/min; ISO 178
	2.30 GPa	334 ksi	1.3 mm/min, 50 mm span; ASTM D790
Izod Impact, Notched	6.40 J/cm	12.0 ft-lb/in	ASTM D256
	4.80 J/cm @Temperature -30.0 °C	8.99 ft-lb/in @Temperature -22.0 °F	ASTM D256
Izod Impact, Notched (ISO)	55.0 kJ/m²	26.2 ft-lb/in²	80*10*4; ISO 180/1A
	70.0 kJ/m²	33.3 ft-lb/in²	80*10*3; ISO 180/1A
	45.0 kJ/m² @Temperature -30.0 °C	21.4 ft-lb/in² @Temperature -22.0 °F	80*10*3; ISO 180/1A
	45.0 kJ/m² @Temperature -30.0 °C	21.4 ft-lb/in² @Temperature -22.0 °F	80*10*4; ISO 180/1A
Charpy Impact, Notched	6.00 J/cm²	28.6 ft-lb/in²	Edgew 80*10*4 sp=62mm; ISO 179/1eA
	7.00 J/cm²	33.3 ft-lb/in²	Edgew 80*10*3 sp=62mm; ISO 179/1eA
	4.50 J/cm² @Temperature -30.0 °C	21.4 ft-lb/in² @Temperature -22.0 °F	Edgew 80*10*3 sp=62mm; ISO 179/1eA
	4.50 J/cm² @Temperature -30.0 °C	21.4 ft-lb/in² @Temperature -22.0 °F	Edgew 80*10*4 sp=62mm; ISO 179/1eA
Dart Drop, Total Energy	56.0 J @Temperature 23.0 °C	41.3 ft-lb @Temperature 73.4 °F	ASTM D3763
	70.0 J @Temperature -30.0 °C	51.6 ft-lb @Temperature -22.0 °F	ASTM D3763

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	70.0 µm/m-°C @Temperature -40.0 - 40.0 °C	38.9 µin/in-°F @Temperature -40.0 - 104 °F	ASTM E 831
	70.0 µm/m-°C @Temperature -40.0 - 40.0 °C	38.9 µin/in-°F @Temperature -40.0 - 104 °F	ISO 11359-2
CTE, linear, Transverse to Flow	70.0 µm/m-°C @Temperature -40.0 - 40.0 °C	38.9 µin/in-°F @Temperature -40.0 - 104 °F	ASTM E 831
	70.0 µm/m-°C @Temperature -40.0 - 40.0 °C	38.9 µin/in-°F @Temperature -40.0 - 104 °F	ISO 11359-2
Thermal Conductivity	0.200 W/m-K	1.39 BTU-in/hr-ft²-°F	ISO 8302
Deflection Temperature at 0.46 MPa (66 psi)	126 °C	259 °F	Flatw 80*10*4 sp=64mm; ISO 75/Bf
Deflection Temperature at 1.8 MPa (264 psi)	105 °C	221 °F	Flatw 80*10*4 sp=64mm; ISO 75/Af
	107 °C @Thickness 3.20 mm	225 °F @Thickness 0.126 in	unannealed; ASTM D648
Vicat Softening Point	127 °C	261 °F	Rate B/50; ASTM D1525
	127 °C	261 °F	Rate B/50; ISO 306
	129 °C	264 °F	Rate B/120; ISO 306

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

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

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