

SABIC Innovative Plastics Cycloloy® FXC630ME PC+ABS (Asia Pacific)

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

Material Notes:

PC+ABS, ECO-conforming flame retardant with metallic or pearlescent appearance.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Cycloloy-FXC630ME-PCABS-Asia-Pacific.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.19 g/cc	1.19 g/cc	ASTM D792
Density	1.18 g/cc	0.0426 lb/in ³	ISO 1183
	1.20 g/cc	0.0434 lb/in ³	ISO 1183
Linear Mold Shrinkage, Flow	0.0030 - 0.0050 cm/cm	0.0030 - 0.0050 in/in	SABIC Method
	@Thickness 3.20 mm	@Thickness 0.126 in	
Melt Flow	14 g/10 min	14 g/10 min	ASTM D1238
	@Load 2.16 kg, Temperature 260 °C	@Load 4.76 lb, Temperature 500 °F	
Melt Index of Compound	14 g/10 min	14 g/10 min	MVR [cm ³ /10 min]; ISO 1133
	@Load 2.16 kg, Temperature 260 °C	@Load 4.76 lb, Temperature 500 °F	
	22 g/10 min	22 g/10 min	MVR [cm ³ /10 min]; ISO 1133
	@Load 5.00 kg, Temperature 260 °C	@Load 11.0 lb, Temperature 500 °F	

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	121	121	ISO 2039-2
Hardness, H358/30	99.0 MPa	14400 psi	ISO 2039-1
Tensile Strength at Break	45.0 MPa	6530 psi	50 mm/min; ISO 527
	46.0 MPa	6670 psi	Type I, 50 mm/min; ASTM D638
Tensile Strength, Yield	55.0 MPa	7980 psi	50 mm/min; ISO 527
	59.0 MPa	8560 psi	Type I, 50 mm/min; ASTM D638
Elongation at Break	15 %	15 %	50 mm/min; ISO 527
	20 %	20 %	Type I, 50 mm/min; ASTM D638
Elongation at Yield	4.0 %	4.0 %	Type I, 50 mm/min; ASTM D638

Mechanical Properties	Metric	English	Comments, ISO 527
Tensile Modulus	2.40 GPa	348 ksi	1 mm/min; ISO 527
	3.10 GPa	450 ksi	50 mm/min; ASTM D638
Flexural Yield Strength	82.0 MPa	11900 psi	2 mm/min; ISO 178
	94.0 MPa	13600 psi	1.3 mm/min, 50 mm span; ASTM D790
Flexural Modulus	2.40 GPa	348 ksi	2 mm/min; ISO 178
	2.68 GPa	389 ksi	1.3 mm/min, 50 mm span; ASTM D790
Izod Impact, Notched	1.60 J/cm	3.00 ft-lb/in	ASTM D256
Izod Impact, Notched (ISO)	24.0 kJ/m ²	11.4 ft-lb/in ²	80*10*4; ISO 180/1A
	12.0 kJ/m ² @Temperature -30.0 °C	5.71 ft-lb/in ² @Temperature -22.0 °F	80*10*4; ISO 180/1A
Charpy Impact, Notched	2.50 J/cm ²	11.9 ft-lb/in ²	Edgew 80*10*4 sp=62mm; ISO 179/1eA
	1.30 J/cm ² @Temperature -30.0 °C	6.19 ft-lb/in ² @Temperature -22.0 °F	Edgew 80*10*4 sp=62mm; ISO 179/1eA
Dart Drop, Total Energy	47.0 J	34.7 ft-lb	ASTM D3763
	@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	
	80.0 μm/m-°C	44.4 μin/in-°F	ISO 11359-2
	@Temperature 23.0 - 60.0 °C	@Temperature 73.4 - 140 °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	
	80.0 μm/m-°C	44.4 μin/in-°F	ISO 11359-2
	@Temperature 23.0 - 60.0 °C	@Temperature 73.4 - 140 °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 (66.9 psi)	90.0 °C @Thickness 3.20 mm	194 °F @Thickness 0.126 in	unannealed; ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	108 °C	226 °F	Edgew 120*10*4 sp=100mm; ISO 75/Ae
	82.0 °C @Thickness 3.20 mm	180 °F @Thickness 0.126 in	unannealed; ASTM D648
Vicat Softening Point	98.0 °C	208 °F	Rate B/50; ASTM D1525
	128 °C	262 °F	Rate B/50; ISO 306
	130 °C	266 °F	Rate B/120; ISO 306
UL RTI, Electrical	60.0 °C	140 °F	UL 746B
UL RTI, Mechanical with Impact	60.0 °C	140 °F	UL 746B
UL RTI, Mechanical without Impact	60.0 °C	140 °F	UL 746B
Flammability, UL94	V-2 @Thickness 1.01 mm	V-2 @Thickness 0.0398 in	UL 94
	V-1 @Thickness 1.19 mm	V-1 @Thickness 0.0469 in	UL 94
	V-0 @Thickness 1.49 mm	V-0 @Thickness 0.0587 in	UL 94
	5VB @Thickness 2.00 mm	5VB @Thickness 0.0787 in	UL 94
Oxygen Index	23 %	23 %	ISO 4589

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 Constant	2.7 @Frequency 1.00e+6 Hz	2.7 @Frequency 1.00e+6 Hz	IEC 60250
	2.8 @Frequency 50.0 - 60.0 Hz	2.8 @Frequency 50.0 - 60.0 Hz	IEC 60250

Electrical Properties	Metric	English	Comments
Dielectric Strength	@Thickness 3.20 mm	@Thickness 0.126 in	in oil; IEC 60243-1
	25.0 kV/mm	635 kV/in	in oil; IEC 60243-1
	@Thickness 1.60 mm	@Thickness 0.0630 in	
Dielectric Strength	35.0 kV/mm	889 kV/in	in oil; IEC 60243-1
	@Thickness 0.800 mm	@Thickness 0.0315 in	
	0.0030	0.0030	IEC 60250
Dissipation Factor	@Frequency 50.0 - 60.0 Hz	@Frequency 50.0 - 60.0 Hz	IEC 60250
	0.0050	0.0050	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	IEC 60250

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

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