

## SABIC Innovative Plastics Cycloy® CY6012 PC+ABS (Asia Pacific)

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

### Material Notes:

Cycloy\* resin grade CY6012 is an injection moldable PC/ABS blend with non-brominated and non-chlorinated flame retardant systems. Excellent impact/flow balance together with a UL-94 V0 & 5VB rating at 1.5mm makes it an ideal candidate for various thin wall applications.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_SABIC-Innovative-Plastics-Cycloy-CY6012-PCABS-Asia-Pacific.php](http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Cycloy-CY6012-PCABS-Asia-Pacific.php)

Physical Properties	Metric	English	Comments
Specific Gravity	1.19 g/cc	1.19 g/cc	ASTM D792
Density	1.19 g/cc	0.0430 lb/in <sup>3</sup>	ISO 1183
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	21 g/10 min @Load 2.16 kg, Temperature 260 °C	21 g/10 min @Load 4.76 lb, Temperature 500 °F	ASTM D1238

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	44.0 MPa	6380 psi	Type I, 50 mm/min; ASTM D638
	48.0 MPa	6960 psi	50 mm/min; ISO 527
Tensile Strength, Yield	59.0 MPa	8560 psi	Type I, 50 mm/min; ASTM D638
	59.0 MPa	8560 psi	50 mm/min; ISO 527
Elongation at Break	65 %	65 %	Type I, 50 mm/min; ASTM D638
	95 %	95 %	50 mm/min; ISO 527
Elongation at Yield	3.4 %	3.4 %	Type I, 50 mm/min; ASTM D638
	3.5 %	3.5 %	50 mm/min; ISO 527
Tensile Modulus	2.70 GPa	392 ksi	1 mm/min; ISO 527
	2.80 GPa	406 ksi	50 mm/min; ASTM D638
Flexural Strength	92.0 MPa	13300 psi	2 mm/min; ISO 178
Flexural Yield Strength	93.0 MPa	13500 psi	1.3 mm/min, 50 mm span; ASTM D790
Flexural Modulus	2.66 GPa	386 ksi	2 mm/min; ISO 178

Mechanical Properties	Metric	English	Comments
	2.70 GPa	392 ksi	1.4 mm/min, 50 mm span; ASTM D790
Izod Impact, Notched	5.50 J/cm	10.3 ft-lb/in	ASTM D256
	1.13 J/cm @Temperature -30.0 °C	2.12 ft-lb/in @Temperature -22.0 °F	ASTM D256
Izod Impact, Notched (ISO)	34.0 kJ/m <sup>2</sup>	16.2 ft-lb/in <sup>2</sup>	80*10*4; ISO 180/1A
	11.0 kJ/m <sup>2</sup> @Temperature -30.0 °C	5.23 ft-lb/in <sup>2</sup> @Temperature -22.0 °F	80*10*4; ISO 180/1A
Charpy Impact, Notched	2.70 J/cm <sup>2</sup>	12.8 ft-lb/in <sup>2</sup>	Edgew 80*10*4 sp=62mm; ISO 179/1eA
Dart Drop, Total Energy	63.0 J @Temperature 23.0 °C	46.5 ft-lb @Temperature 73.4 °F	ASTM D3763

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	73.0 µm/m-°C @Temperature -40.0 - 40.0 °C	40.6 µin/in-°F @Temperature -40.0 - 104 °F	ASTM E 831
CTE, linear, Transverse to Flow	77.0 µm/m-°C @Temperature -40.0 - 40.0 °C	42.8 µin/in-°F @Temperature -40.0 - 104 °F	ASTM E 831
Deflection Temperature at 0.46 MPa (66 psi)	73.0 °C @Thickness 3.20 mm	163 °F @Thickness 0.126 in	unannealed; ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	83.0 °C @Thickness 6.40 mm	181 °F @Thickness 0.252 in	unannealed; ASTM D648
Vicat Softening Point	92.0 °C	198 °F	Rate B/50; ISO 306
	94.0 °C	201 °F	Rate B/120; ISO 306
Flammability, UL94	V-0 @Thickness 1.50 mm	V-0 @Thickness 0.0591 in	UL 94
	5VB @Thickness 1.50 mm	5VB @Thickness 0.0591 in	UL 94

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