

## SABIC Innovative Plastics Cycloy® RCY6713 PC (Asia Pacific)

Category : Polymer , Thermoplastic , Polycarbonate (PC)

### Material Notes:

Cycloy\* RCY6713 resin is an injection moldable high heat PC blend with non-brominated and non-chlorinated flame retardant. It contains 30% post consumer recycle content with a UL-94 V0 rating @ 1.5 mm. Developed for wide variety of applications that require high heat and impact performance. Limited availability and restricted color only.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_SABIC-Innovative-Plastics-Cycloy-RCY6713-PC-Asia-Pacific.php](http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Cycloy-RCY6713-PC-Asia-Pacific.php)

Physical Properties	Metric	English	Comments
Specific Gravity	1.19 g/cc	1.19 g/cc	ASTM D792
Density	1.20 g/cc	0.0434 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	6.3 g/10 min @Load 2.16 kg, Temperature 260 °C	6.3 g/10 min @Load 4.76 lb, Temperature 500 °F	ASTM D1238
Melt Index of Compound	16 g/10 min @Load 5.00 kg, Temperature 260 °C	16 g/10 min @Load 11.0 lb, Temperature 500 °F	MVR [cm <sup>3</sup> /10 min]; ISO 1133

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	50.0 MPa	7250 psi	5 mm/min; ISO 527
	54.0 MPa	7830 psi	Type I, 50 mm/min; ASTM D638
Tensile Strength, Yield	58.0 MPa	8410 psi	5 mm/min; ISO 527
	60.0 MPa	8700 psi	Type I, 50 mm/min; ASTM D638
Elongation at Break	72 %	72 %	5 mm/min; ISO 527
	76 %	76 %	Type I, 50 mm/min; ASTM D638
Elongation at Yield	5.0 %	5.0 %	5 mm/min; ISO 527
	5.5 %	5.5 %	Type I, 50 mm/min; ASTM D638
Tensile Modulus	2.30 GPa	334 ksi	50 mm/min; ASTM D638
	2.30 GPa	334 ksi	1 mm/min; ISO 527
Flexural Yield Strength	90.0 MPa	13100 psi	2 mm/min; ISO 178

Mechanical Properties	Metric	English	Comments
	93.0 MPa	13500 psi	1.3 mm/min, 50 mm span; ASTM D790
Flexural Modulus	2.30 GPa	334 ksi	2 mm/min; ISO 178
	2.32 GPa	336 ksi	1.3 mm/min, 50 mm span; ASTM D790
Izod Impact, Notched	7.50 J/cm	14.1 ft-lb/in	ASTM D256
Izod Impact, Notched (ISO)	43.0 kJ/m <sup>2</sup>	20.5 ft-lb/in <sup>2</sup>	80*10*4; ISO 180/1A
	65.0 kJ/m <sup>2</sup>	30.9 ft-lb/in <sup>2</sup>	80*10*3; ISO 180/1A
	13.0 kJ/m <sup>2</sup> @Temperature -30.0 °C	6.19 ft-lb/in <sup>2</sup> @Temperature -22.0 °F	80*10*4; ISO 180/1A
	15.0 kJ/m <sup>2</sup> @Temperature 0.000 °C	7.14 ft-lb/in <sup>2</sup> @Temperature 32.0 °F	80*10*4; ISO 180/1A
	17.0 kJ/m <sup>2</sup> @Temperature -30.0 °C	8.09 ft-lb/in <sup>2</sup> @Temperature -22.0 °F	80*10*3; ISO 180/1A
	51.0 kJ/m <sup>2</sup> @Temperature 0.000 °C	24.3 ft-lb/in <sup>2</sup> @Temperature 32.0 °F	80*10*3; ISO 180/1A
Charpy Impact, Notched	4.80 J/cm <sup>2</sup>	22.8 ft-lb/in <sup>2</sup>	Edgew 80*10*4 sp=62mm; ISO 179/1eA
	1.30 J/cm <sup>2</sup> @Temperature -30.0 °C	6.19 ft-lb/in <sup>2</sup> @Temperature -22.0 °F	Edgew 80*10*4 sp=62mm; ISO 179/1eA
Dart Drop, Total Energy	70.0 J @Temperature 23.0 °C	51.6 ft-lb @Temperature 73.4 °F	ASTM D3763

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	70.0 µm/m-°C @Temperature 23.0 - 60.0 °C	38.9 µin/in-°F @Temperature 73.4 - 140 °F	ISO 11359-2
	77.4 µm/m-°C @Temperature -40.0 - 40.0 °C	43.0 µin/in-°F @Temperature -40.0 - 104 °F	ASTM E 831
CTE, linear, Transverse to Flow	59.4 µm/m-°C @Temperature -40.0 - 40.0 °C	33.0 µin/in-°F @Temperature -40.0 - 104 °F	ASTM E 831
	70.0 µm/m-°C	38.9 µin/in-°F	

Thermal Properties	Metric @ Temperature 23.0 - 60.0 °C	English @ Temperature 73.4 - 140 °F	ISO 11359-2 Comments
Deflection Temperature at 0.46 MPa (66 psi)	126 °C	259 °F	Edgew 120*10*4 sp=100mm; ISO 75/Be
	126 °C @Thickness 3.20 mm	259 °F @Thickness 0.126 in	unannealed; ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	113 °C	235 °F	Edgew 120*10*4 sp=100mm; ISO 75/Ae
	112 °C @Thickness 3.20 mm	234 °F @Thickness 0.126 in	unannealed; ASTM D648
Vicat Softening Point	133 °C	271 °F	Rate B/50; ISO 306
	135 °C	275 °F	Rate B/120; ISO 306
Flammability, UL94	V-1 @Thickness 1.00 mm	V-1 @Thickness 0.0394 in	UL 94
	V-0 @Thickness 1.50 mm	V-0 @Thickness 0.0591 in	UL 94

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

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