

## SABIC Innovative Plastics Cycloy® CY6414 PC+ABS (Europe-Africa-Middle East)

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

### Material Notes:

This data was supplied by SABIC-IP for the Europe-Africa-Middle East region.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_SABIC-Innovative-Plastics-Cycloy-CY6414-PCABS-Europe-Africa-Middle-East.php](http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Cycloy-CY6414-PCABS-Europe-Africa-Middle-East.php)

Physical Properties	Metric	English	Comments
Density	1.18 g/cc	0.0426 lb/in <sup>3</sup>	ISO 1183
Moisture Absorption at Equilibrium	0.10 %	0.10 %	23°C / 50% RH; ISO 62
Water Absorption at Saturation	0.30 % @Temperature 23.0 °C	0.30 % @Temperature 73.4 °F	ISO 62
Linear Mold Shrinkage, Flow	0.0040 - 0.0080 cm/cm @Thickness 3.20 mm	0.0040 - 0.0080 in/in @Thickness 0.126 in	SABIC Method
Melt Flow	13 g/10 min @Load 5.00 kg, Temperature 260 °C	13 g/10 min @Load 11.0 lb, Temperature 500 °F	[cm <sup>3</sup> /10 min] Melt Volume Rate; ISO 1133

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	62.0 MPa	8990 psi	Type I, 50 mm/min; ASTM D 638
	67.0 MPa	9720 psi	50 mm/min; ISO 527
Tensile Strength, Yield	64.0 MPa	9280 psi	Type I, 50 mm/min; ASTM D 638
	66.0 MPa	9570 psi	50 mm/min; ISO 527
Elongation at Break	85 %	85 %	Type I, 50 mm/min; ASTM D 638
	>= 100 %	>= 100 %	50 mm/min; ISO 527
Elongation at Yield	5.7 %	5.7 %	50 mm/min; ISO 527
	6.0 %	6.0 %	Type I, 50 mm/min; ASTM D 638
Tensile Modulus	2.33 GPa	338 ksi	5 mm/min; ASTM D 638
	2.42 GPa	351 ksi	1 mm/min; ISO 527
Flexural Yield Strength	96.0 MPa	13900 psi	2 mm/min; ISO 178
Flexural Modulus	2.47 GPa	358 ksi	2 mm/min; ISO 178

Mechanical Properties	Metric	English	Comments
Izod Impact, Notched	@Temperature -30.0 °C	@Temperature -22.0 °F	ASTM D 256
	5.25 J/cm	9.84 ft-lb/in	ASTM D 256
	@Temperature 0.000 °C	@Temperature 32.0 °F	
Izod Impact, Notched (ISO)	7.95 J/cm	14.9 ft-lb/in	ASTM D 256
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	12.0 kJ/m <sup>2</sup>	5.71 ft-lb/in <sup>2</sup>	80*10*3; ISO 180/1A
Izod Impact, Notched (ISO)	@Temperature -30.0 °C	@Temperature -22.0 °F	
	14.0 kJ/m <sup>2</sup>	6.66 ft-lb/in <sup>2</sup>	80*10*3; ISO 180/1A
	@Temperature 0.000 °C	@Temperature 32.0 °F	
Charpy Impact, Notched	52.0 kJ/m <sup>2</sup>	24.7 ft-lb/in <sup>2</sup>	80*10*3; ISO 180/1A
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	1.20 J/cm <sup>2</sup>	5.71 ft-lb/in <sup>2</sup>	V-notch Edgew 80*10*3 sp=62mm; ISO 179/1eA
Charpy Impact, Notched	@Temperature -30.0 °C	@Temperature -22.0 °F	
	1.70 J/cm <sup>2</sup>	8.09 ft-lb/in <sup>2</sup>	V-notch Edgew 80*10*3 sp=62mm; ISO 179/1eA
	@Temperature 0.000 °C	@Temperature 32.0 °F	
Charpy Impact, Notched	2.80 J/cm <sup>2</sup>	13.3 ft-lb/in <sup>2</sup>	V-notch Edgew 80*10*3 sp=62mm; ISO 179/1eA
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	70.0 µm/m-°C	38.9 µin/in-°F	ISO 11359-2
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	
CTE, linear, Transverse to Flow	70.0 µm/m-°C	38.9 µin/in-°F	ISO 11359-2
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	
Deflection Temperature at 1.8 MPa (264 psi)	116 °C	241 °F	Flatw 80*10*4 sp=64mm; ISO 75/Af
	118 °C	244 °F	unannealed; ASTM D 648
	@Thickness 6.40 mm	@Thickness 0.252 in	
Vicat Softening Point	133 °C	271 °F	Rate B/50; ISO 306
	134 °C	273 °F	Rate B/120; ISO 306
	V-0	V-0	

Flammability, UL 94 Thermal Properties	Metric @Thickness 1.20 mm	English @Thickness 0.0472 in	UL 94 Comments
	5VB @Thickness 2.50 mm	5VB @Thickness 0.0984 in	UL 94
Oxygen Index	32 %	32 %	LOI; ISO 4589
Glow Wire Test	775 °C @Thickness 0.750 mm	1430 °F @Thickness 0.0295 in	Glow Wire Ignitability Temperature; IEC 60695-2-13
	775 °C @Thickness 1.50 mm	1430 °F @Thickness 0.0591 in	Glow Wire Ignitability Temperature; IEC 60695-2-13
	775 °C @Thickness 3.00 mm	1430 °F @Thickness 0.118 in	Glow Wire Ignitability Temperature; IEC 60695-2-13
	960 °C @Thickness 0.750 mm	1760 °F @Thickness 0.0295 in	Glow Wire Flammability Index 960°C, passes at, by VDE; IEC 60695-2-12

Electrical Properties	Metric	English	Comments
Surface Resistance	<= 4.00e+16 ohm	<= 4.00e+16 ohm	ROA; IEC 60093
Dielectric Constant	2.94 @Frequency 1.00e+6 Hz	2.94 @Frequency 1.00e+6 Hz	ASTM D 150
	3.0 @Frequency 1000 Hz	3.0 @Frequency 1000 Hz	ASTM D 150
Dissipation Factor	0.0016 @Frequency 1000 Hz	0.0016 @Frequency 1000 Hz	ASTM D 150
	0.0088 @Frequency 1.00e+6 Hz	0.0088 @Frequency 1.00e+6 Hz	ASTM D 150
	0.0088 @Frequency 1.00e+6 Hz	0.0088 @Frequency 1.00e+6 Hz	IEC 60250
Comparative Tracking Index	175 - 250 V	175 - 250 V	PLC code 3; UL 746A
Hot Wire Ignition, HWI	30 - 60 sec	30 - 60 sec	PLC code 2; UL 746A
High Amp Arc Ignition, HAI	60 - 120 arcs	60 - 120 arcs	surface, PLC code 1; UL 746A

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

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