

SABIC Innovative Plastics Cycloy® C1000 PC+ABS (Europe-Africa-Middle East)

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

Material Notes:

CYCOLOY C1000 is a PC+ABS blend developed with emphasis on excellent processing efficiency while maintaining good heat resistance and impact ductility. It is an excellent material choice for a wide variety of automotive, appliance and electrical applications in 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-C1000-PCABS-Europe-Africa-Middle-East.php

Physical Properties	Metric	English	Comments
Density	1.12 g/cc	0.0405 lb/in ³	ISO 1183
Moisture Absorption at Equilibrium	0.20 %	0.20 %	23°C / 50% RH; ISO 62
Water Absorption at Saturation	0.70 % @Temperature 23.0 °C	0.70 % @Temperature 73.4 °F	ISO 62
Linear Mold Shrinkage, Flow	0.0050 - 0.0070 cm/cm	0.0050 - 0.0070 in/in	on tensile bar; SABIC Method
Melt Flow	15 g/10 min @Load 5.00 kg, Temperature 260 °C	15 g/10 min @Load 11.0 lb, Temperature 500 °F	[cm ³ /10 min] Melt Volume Rate; ISO 1133

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	117	117	ISO 2039-2
Hardness, H358/30	106 MPa	15400 psi	ISO 2039-1
Tensile Strength at Break	40.0 MPa	5800 psi	5 mm/min; ISO 527
	40.0 MPa	5800 psi	50 mm/min; ISO 527
Tensile Strength, Yield	50.0 MPa	7250 psi	5 mm/min; ISO 527
	55.0 MPa	7980 psi	50 mm/min; ISO 527
Elongation at Break	40 %	40 %	5 mm/min; ISO 527
	>= 50 %	>= 50 %	50 mm/min; ISO 527
Elongation at Yield	4.0 %	4.0 %	5 mm/min; ISO 527
	4.0 %	4.0 %	50 mm/min; ISO 527
Tensile Modulus	2.50 GPa	363 ksi	1 mm/min; ISO 527

Flexural Yield Strength Mechanical Properties	85.0 MPa Metric	12300 psi English	2 mm/min; ISO 178 Comments
Flexural Modulus	2.30 GPa	334 ksi	2 mm/min; ISO 178
Izod Impact, Notched (ISO)	15.0 kJ/m ² @Temperature -30.0 °C	7.14 ft-lb/in ² @Temperature -22.0 °F	80*10*3; ISO 180/1A
	45.0 kJ/m ² @Temperature 23.0 °C	21.4 ft-lb/in ² @Temperature 73.4 °F	80*10*3; ISO 180/1A
Charpy Impact, Notched	1.50 J/cm ² @Temperature -30.0 °C	7.14 ft-lb/in ² @Temperature -22.0 °F	V-notch Edgew 80*10*3 sp=62mm; ISO 179/1eA
	4.50 J/cm ² @Temperature 23.0 °C	21.4 ft-lb/in ² @Temperature 73.4 °F	V-notch Edgew 80*10*3 sp=62mm; ISO 179/1eA
Taber Abrasion, mg/1000 Cycles	62 @Load 1.00 kg	62 @Load 2.20 lb	CS-17; SABIC Method

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	80.0 µm/m-°C	44.4 µin/in-°F	ISO 11359-2
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	
CTE, linear, Transverse to Flow	80.0 µm/m-°C	44.4 µin/in-°F	ISO 11359-2
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	
Thermal Conductivity	0.200 W/m-K	1.39 BTU-in/hr-ft ² -°F	ISO 8302
Hot Ball Pressure Test	<= 100 °C	<= 212 °F	IEC 60695-10-2
Deflection Temperature at 0.46 MPa (66 psi)	115 °C	239 °F	Edgew 120*10*4 sp=100mm; ISO 75/Be
Deflection Temperature at 1.8 MPa (264 psi)	92.0 °C	198 °F	Edgew 120*10*4 sp=100mm; ISO 75/Ae
Vicat Softening Point	113 °C	235 °F	Rate B/50; ISO 306
	115 °C	239 °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	HB	HB	UL 94
	@Thickness 1.50 mm	@Thickness 0.0591 in	

Thermal Properties	Metric	English	Comments
	@Thickness 3.00 mm	@Thickness 0.118 in	2nd value; UL 94
Glow Wire Test	650 °C @Thickness 1.00 mm	1200 °F @Thickness 0.0394 in	Glow Wire Flammability Index; IEC 60695-2-12

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
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
Dissipation Factor	0.0020 @Frequency 50.0 - 60.0 Hz	0.0020 @Frequency 50.0 - 60.0 Hz	IEC 60250
	0.0070 @Frequency 1.00e+6 Hz	0.0070 @Frequency 1.00e+6 Hz	IEC 60250
Comparative Tracking Index	250 V	250 V	IEC 60112

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

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