

SABIC Innovative Plastics Cycloy® C1200 PC+ABS (Europe-Africa-Middle East)

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

Material Notes:

CYCOLOY C1200 is a PC+ABS blend developed to serve extremely demanding applications in a variety of markets while maintaining good processing properties. The combination of superior heat resistance and excellent sub zero temperature ductility makes CYCOLOY C1200 the ideal candidate for high load and impact zone applications in automotive components, 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-C1200-PCABS-Europe-Africa-Middle-East.php

Physical Properties	Metric	English	Comments
Density	1.15 g/cc	0.0415 lb/in ³	ISO 1183
Moisture Absorption at Equilibrium	0.20 %	0.20 %	23°C / 50% RH; ISO 62
Water Absorption at Saturation	0.60 %	0.60 %	ISO 62
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Linear Mold Shrinkage, Flow	0.0050 - 0.0070 cm/cm	0.0050 - 0.0070 in/in	on tensile bar; SABIC Method
Melt Flow	12 g/10 min	12 g/10 min	[cm ³ /10 min] Melt Volume Rate; ISO 1133
	@Load 5.00 kg, Temperature 260 °C	@Load 11.0 lb, Temperature 500 °F	

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	120	120	ISO 2039-2
Hardness, H358/30	99.0 MPa	14400 psi	ISO 2039-1
Tensile Strength at Break	40.0 MPa	5800 psi	5 mm/min; ISO 527
	50.0 MPa	7250 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	>= 50 %	>= 50 %	50 mm/min; ISO 527
	100 %	100 %	5 mm/min; ISO 527
Elongation at Yield	4.0 %	4.0 %	50 mm/min; ISO 527
	5.0 %	5.0 %	5 mm/min; ISO 527

Tensile Modulus Mechanical Properties	2.40 GPa Metric	348 ksi English	1 mm/min; ISO 527 Comments
Flexural Yield Strength	85.0 MPa	12300 psi	2 mm/min; ISO 178
Flexural Modulus	2.30 GPa	334 ksi	2 mm/min; ISO 178
Izod Impact, Notched (ISO)	30.0 kJ/m ²	14.3 ft-lb/in ²	80*10*3; ISO 180/1A
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	50.0 kJ/m ²	23.8 ft-lb/in ²	80*10*3; ISO 180/1A
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Charpy Impact, Notched	3.00 J/cm ²	14.3 ft-lb/in ²	V-notch Edgew 80*10*3 sp=62mm; ISO 179/1eA
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	5.00 J/cm ²	23.8 ft-lb/in ²	V-notch Edgew 80*10*3 sp=62mm; ISO 179/1eA
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Taber Abrasion, mg/1000 Cycles	63	63	CS-17; SABIC Method
	@Load 1.00 kg	@Load 2.20 lb	

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	<= 125 °C	<= 257 °F	IEC 60695-10-2
Deflection Temperature at 0.46 MPa (66 psi)	130 °C	266 °F	Edgew 120*10*4 sp=100mm; ISO 75/Be
Deflection Temperature at 1.8 MPa (264 psi)	110 °C	230 °F	Edgew 120*10*4 sp=100mm; ISO 75/Ae
Vicat Softening Point	132 °C	270 °F	Rate B/50; ISO 306
	134 °C	273 °F	Rate B/120; ISO 306
UL RTI, Electrical	105 °C	221 °F	UL 746B
UL RTI, Mechanical with Impact	80.0 °C	176 °F	UL 746B
UL RTI, Mechanical without Impact	105 °C	221 °F	UL 746B
	HB	HB	

Flammability UL 94 Thermal Properties	Metric @Thickness 1.20 mm	English @Thickness 0.0472 in	UL 94 Comments
	HB @Thickness 3.00 mm	HB @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 - 400 V	250 - 400 V	PLC code 2; UL 746A

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

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