SABIC Innovative Plastics Cycoloy® C3100 PC+ABS (Europe-Africa-Middle East)

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

Material Notes:

C3100 is blow moulding/extrusion grade offering low temperature ductility, high heat resistance and high meltstrength.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-Cycoloy-C3100-PCABS-Europe-Africa-Middle-East.php

Physical Properties	Metric	English	Comments
Density	1.15 g/cc	0.0415 lb/in³	ISO 1183
Moisture Absorption at Equilibrium	0.20 %	0.20 %	23°C / 50% RH; ISO 62
Water Absorption at Saturation	0.60 % @Temperature 23.0 °C	0.60 % @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	2.0 g/10 min @Load 5.00 kg, Temperature 260 °C	2.0 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	116	116	ISO 2039-2
Hardness, H358/30	89.0 MPa	12900 psi	ISO 2039-1
Tensile Strength at Break	45.0 MPa	6530 psi	5 mm/min; ISO 527
	45.0 MPa	6530 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
	70 %	70 %	5 mm/min; ISO 527
Elongation at Yield	5.0 %	5.0 %	5 mm/min; ISO 527
	5.0 %	5.0 %	50 mm/min; ISO 527
Tensile Modulus	2.20 GPa	319 ksi	1 mm/min; ISO 527
Flexural Yield Strength	78.0 MPa	11300 psi	2 mm/min; ISO 178

Mechanical Properties	Metric	English	Comments
Izod Impact, Notched (ISO)	40.0 kJ/m² @Temperature -30.0 °C	19.0 ft-lb/in² @Temperature -22.0 °F	80*10*3; ISO 180/1A
	50.0 kJ/m² @Temperature 23.0 °C	23.8 ft-lb/in² @Temperature 73.4 °F	80*10*3; ISO 180/1A
Charpy Impact, Notched	4.00 J/cm² @Temperature -30.0 °C	19.0 ft-lb/in² @Temperature -22.0 °F	V-notch Edgew 80*10*3 sp=62mm; ISO 179/1eA
	5.00 J/cm² @Temperature 23.0 °C	23.8 ft-lb/in² @Temperature 73.4 °F	V-notch Edgew 80*10*3 sp=62mm; ISO 179/1eA
Taber Abrasion, mg/1000 Cycles	55 @Load 1.00 kg	55 @Load 2.20 lb	CS-17; SABIC Method

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	80.0 µm/m-°C @Temperature -40.0 - 40.0 °C	44.4 µin/in-°F @Temperature -40.0 - 104 °F	ISO 11359-2
CTE, linear, Transverse to Flow	80.0 µm/m-°C @Temperature -40.0 - 40.0 °C	44.4 µin/in-°F @Temperature -40.0 - 104 °F	ISO 11359-2
Thermal Conductivity	0.200 W/m-K	1.39 BTU-in/hr-ft²-°F	ISO 8302
Hot Ball Pressure Test	<= 125 °C	<= 257 °F	IEC 60695-10-2
Deflection Temperature at 0.46 MPa (66 psi)	124 °C	255 °F	Edgew 120*10*4 sp=100mm; ISO 75/Be
Deflection Temperature at 1.8 MPa (264 psi)	105 °C	221 °F	Edgew 120*10*4 sp=100mm; ISO 75/Ae
Vicat Softening Point	133 °C	271 °F	Rate B/50; ISO 306
	134 °C	273 °F	Rate B/120; ISO 306
Flammability, UL94	HB @Thickness 1.60 mm	HB @Thickness 0.0630 in	UL 94 by SABIC-IP
Oxygen Index	24 %	24 %	LOI; ISO 4589
Glow Wire Test	750 °C @Thickness 1.00 mm	1380 °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
	0.0030 @Frequency 1.00e+6 Hz	0.0030 @Frequency 1.00e+6 Hz	IEC 60250

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

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