SABIC Innovative Plastics Cycoloy® C1100HF PC+ABS (Europe-Africa-Middle East)

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

Material Notes:

CYCOLOY C1100HF is the improved flow version of CYCOLOY C1100 and has been developed to better fill long and complex parts while maintaining still excellent mechanical properties. Its superior flow will enhance productivity and appearance of the finished parts.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-C1100HF-PCABS-Europe-Africa-Middle-East.php

Physical Properties	Metric	English	Comments
Density	1.12 g/cc	0.0405 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	6.0 g/10 min @Load 2.16 kg, Temperature 260 °C	6.0 g/10 min @Load 4.76 lb, Temperature 500 °F	[cm^3/10 min] Melt Volume Rate; ISO 1133
	20 g/10 min @Load 5.00 kg, Temperature 260 °C	20 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	99.0 MPa	14400 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	55.0 MPa	7980 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
	120 %	120 %	5 mm/min; ISO 527
Elongation at Yield	4.0 %	4.0 %	50 mm/min; ISO 527

Mechanical Properties	Metric	English	Comments
Tensile Modulus	2.40 GPa	348 ksi	1 mm/min; ISO 527
Flexural Yield Strength	75.0 MPa	10900 psi	2 mm/min; ISO 178
Flexural Modulus	2.30 GPa	334 ksi	2 mm/min; ISO 178
Izod Impact, Notched (ISO)	25.0 kJ/m² @Temperature -30.0 °C	11.9 ft-lb/in² @Temperature -22.0 °F	80*10*3; ISO 180/1A
	28.0 kJ/m² @Temperature -30.0 °C	13.3 ft-lb/in² @Temperature -22.0 °F	80*10*4; ISO 180/1A
	50.0 kJ/m² @Temperature 23.0 °C	23.8 ft-lb/in² @Temperature 73.4 °F	80*10*4; 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
Izod Impact, Unnotched (ISO)	NB @Temperature 23.0 °C	NB @Temperature 73.4 °F	80*10*4; ISO 180/1U
	NB @Temperature -30.0 °C	NB @Temperature -22.0 °F	80*10*4; ISO 180/1U
Charpy Impact, Notched	2.50 J/cm² @Temperature -30.0 °C	11.9 ft-lb/in² @Temperature -22.0 °F	V-notch Edgew 80*10*3 sp=62mm; ISO 179/1eA
	3.00 J/cm² @Temperature -30.0 °C	14.3 ft-lb/in² @Temperature -22.0 °F	V-notch Edgew 80*10*4 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
	5.50 J/cm² @Temperature 23.0 °C	26.2 ft-lb/in² @Temperature 73.4 °F	V-notch Edgew 80*10*4 sp=62mm; ISO 179/1eA
Taber Abrasion, mg/1000 Cycles	81 @Load 1.00 kg	81 @Load 2.20 lb	CS-17; SABIC Method

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	80.0 µm/m-°C @Temperature 23.0 - 60.0 °C	44.4 µin/in-°F @Temperature 73.4 - 140 °F	ISO 11359-2

Thermal Properties	Metric	English	Comments
CTE, linear, Transverse to Flow	80.0 µm/m-°C @Temperature 23.0 - 60.0 °C	44.4 µin/in-°F @Temperature 73.4 - 140 °F	ISO 11359-2
Thermal Conductivity	0.200 W/m-K	1.39 BTU-in/hr-ft²-°F	ISO 8302
Hot Ball Pressure Test	<= 115 °C	<= 239 °F	IEC 60695-10-2
Deflection Temperature at 0.46 MPa (66 psi)	120 °C	248 °F	Edgew 120*10*4 sp=100mm; ISO 75/Be
Deflection Temperature at 1.8 MPa (264 psi)	100 °C	212 °F	Edgew 120*10*4 sp=100mm; ISO 75/Ae
Vicat Softening Point	126 °C	259 °F	Rate B/50; ISO 306
	128 °C	262 °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 @Thickness 1.50 mm	HB @Thickness 0.0591 in	UL 94
	HB @Thickness 3.00 mm	HB @Thickness 0.118 in	2nd value; UL 94
Glow Wire Test	650 °C @Thickness 3.20 mm	1200 °F @Thickness 0.126 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	635 kV/in	in oil; IEC 60243-1

Electrical Properties	Metric	English	Comments
	@Thickness 1.60 mm	@Thickness 0.0630 in	
	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

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

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