SABIC Innovative Plastics Cycoloy® C2800 PC+ABS (Europe-Africa-Middle East)

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

Material Notes:

Non-chlorinated and non-brominated flame retardant PC+ABS offering balanced flow and impact properties for various applications.

Order this product through the following link:
http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Cycoloy-C2800-PCABS-Europe-Africa-Middle-East.php

Physical Properties	Metric	English	Comments
Density	1.17 g/cc	0.0423 lb/in³	ISO 1183
Moisture Absorption	0.200 %	0.200 %	23°C / 50% RH; ISO 62
Water Absorption at Saturation	0.60 %	0.60 %	ISO 62
Linear Mold Shrinkage, Flow	0.0040 - 0.0060 cm/cm	0.0040 - 0.0060 in/in	on Tensile Bar; SABIC Method
Melt Index of Compound	15 g/10 min @Load 2.16 kg, Temperature 260 °C	15 g/10 min @Load 4.76 lb, Temperature 500 °F	MVR [cm^3/10 min]; ISO 1133

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	122	122	ISO 2039-2
Hardness, H358/30	115 MPa	16700 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	29 %	29 %	5 mm/min; ISO 527
	>= 50 %	>= 50 %	50 mm/min; ISO 527
Elongation at Yield	3.0 %	3.0 %	5 mm/min; ISO 527
	3.0 %	3.0 %	50 mm/min; ISO 527
Tensile Modulus	2.70 GPa	392 ksi	1 mm/min; ISO 527
Flexural Yield Strength	90.0 MPa	13100 psi	2 mm/min; ISO 178
Flexural Modulus	2.60 GPa	377 ksi	2 mm/min; ISO 178

Mechanical Properties	Metric	English	Comments
Izod Impact, Notched (ISO)	30.0 kJ/m²	14.3 ft-lb/in²	80*10*4; ISO 180/1A
	45.0 kJ/m²	21.4 ft-lb/in²	80*10*3; ISO 180/1A
	10.0 kJ/m² @Temperature -30.0 °C	4.76 ft-lb/in² @Temperature -22.0 °F	80*10*3; ISO 180/1A
	10.0 kJ/m² @Temperature -30.0 °C	4.76 ft-lb/in² @Temperature -22.0 °F	80*10*4; ISO 180/1A
Izod Impact, Unnotched (ISO)	NB	NB	80*10*3; ISO 180/1U
	NB	NB	80*10*4; ISO 180/1U
	NB @Temperature -30.0 °C	NB @Temperature -22.0 °F	80*10*4; ISO 180/1U
	NB @Temperature -30.0 °C	NB @Temperature -22.0 °F	80*10*3; ISO 180/1U
Charpy Impact, Notched	3.00 J/cm²	14.3 ft-lb/in²	Edgew 80*10*4 sp=62mm; ISO 179/1eA
	4.50 J/cm²	21.4 ft-lb/in²	Edgew 80*10*3 sp=62mm; ISO 179/1eA
	0.900 J/cm² @Temperature -30.0 °C	4.28 ft-lb/in² @Temperature -22.0 °F	Edgew 80*10*4 sp=62mm; ISO 179/1eA
	1.00 J/cm² @Temperature -30.0 °C	4.76 ft-lb/in² @Temperature -22.0 °F	Edgew 80*10*3 sp=62mm; ISO 179/1eA
Taber Abrasion, mg/1000 Cycles	72	72	CS-17, 1 kg; SABIC Method

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	75.0 µm/m-°C @Temperature -40.0 - 40.0 °C	41.7 µin/in-°F @Temperature -40.0 - 104 °F	ISO 11359-2
	80.0 µm/m-°C @Temperature 23.0 - 60.0 °C	44.4 µin/in-°F @Temperature 73.4 - 140 °F	ISO 11359-2
CTE, linear, Transverse to Flow	75.0 µm/m-°C @Temperature -40.0 - 40.0 °C	41.7 µin/in-°F @Temperature -40.0 - 104 °F	ISO 11359-2
	80.0 µm/m-°C @Temperature 23.0 -	44.4 µin/in-°F @Temperature 73.4 -	ISO 11359-2

Thermal Properties	Metric	English	Comments
	60.0 °C	140 °F	
Thermal Conductivity	0.200 W/m-K	1.39 BTU-in/hr-ft²-°F	ISO 8302
Hot Ball Pressure Test	<= 80.0 °C	<= 176 °F	IEC 60695-10-2
Deflection Temperature at 0.46 MPa (66 psi)	88.0 °C	190 °F	Edgew 120*10*4 sp=100mm; ISO 75/Be
Deflection Temperature at 1.8 MPa (264 psi)	78.0 °C	172 °F	Edgew 120*10*4 sp=100mm; ISO 75/Ae
Vicat Softening Point	92.0 °C	198 °F	Rate B/50; ISO 306
	95.0 °C	203 °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	V-2 @Thickness 0.890 mm	V-2 @Thickness 0.0350 in	UL 94
	V-0 @Thickness 1.50 mm	V-0 @Thickness 0.0591 in	UL 94
	5VB @Thickness 2.30 mm	5VB @Thickness 0.0906 in	UL 94
Oxygen Index	32 %	32 %	ISO 4589
Glow Wire Test	850 °C @Thickness 1.00 mm	1560 °F @Thickness 0.0394 in	IEC 60695-2-12
	960 °C @Thickness 3.20 mm	1760 °F @Thickness 0.126 in	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

Electrical Properties	Metric	English	Comments
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	0.0040 @Frequency 50.0 - 60.0 Hz	0.0040 @Frequency 50.0 - 60.0 Hz	IEC 60250
	0.0060 @Frequency 1.00e+6 Hz	0.0060 @Frequency 1.00e+6 Hz	IEC 60250
Comparative Tracking Index	400 - 600 V	400 - 600 V	UL 746A

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

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