

SABIC Innovative Plastics Cyclac® G360 ABS (Europe-Africa-Middle East)

Category : Polymer , Thermoplastic , ABS Polymer , Acrylonitrile Butadiene Styrene (ABS), Impact Grade, Molded

Material Notes:

CYCOLAC G360 is a high flow, high impact, medium to high heat resistant injection moulding ABS grade. It is recommended for large or complex parts in the automotive or electrical power tool segments where the high flow properties of CYCOLAC G360 can be used to advantage. 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-Cyclac-G360-ABS-Europe-Africa-Middle-East.php

Physical Properties	Metric	English	Comments
Density	1.06 g/cc	0.0383 lb/in ³	ISO 1183
Moisture Absorption at Equilibrium	0.20 %	0.20 %	23°C / 50% RH; ISO 62
Water Absorption at Saturation	1.0 % @Temperature 23.0 °C	1.0 % @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	8.0 g/10 min @Load 10.0 kg, Temperature 220 °C	8.0 g/10 min @Load 22.0 lb, Temperature 428 °F	ISO 1133
	8.0 g/10 min @Load 10.0 kg, Temperature 220 °C	8.0 g/10 min @Load 22.0 lb, Temperature 428 °F	[cm ³ /10 min] Melt Volume Rate; ISO 1133

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	114	114	ISO 2039-2
Hardness, H358/30	98.0 MPa	14200 psi	ISO 2039-1
Tensile Strength at Break	35.0 MPa	5080 psi	5 mm/min; ISO 527
	40.0 MPa	5800 psi	50 mm/min; ISO 527
Tensile Strength, Yield	45.0 MPa	6530 psi	5 mm/min; ISO 527
	55.0 MPa	7980 psi	50 mm/min; ISO 527
Elongation at Break	5.0 %	5.0 %	5 mm/min; ISO 527
	5.0 %	5.0 %	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

Mechanical Properties	Metric	English	Comments
Tensile Modulus	2.50 GPa	363 ksi	1 mm/min; ISO 527
Flexural Yield Strength	78.0 MPa	11300 psi	2 mm/min; ISO 178
Flexural Modulus	2.60 GPa	377 ksi	2 mm/min; ISO 178
Izod Impact, Notched (ISO)	8.00 kJ/m ² @Temperature -30.0 °C	3.81 ft-lb/in ² @Temperature -22.0 °F	80*10*4; ISO 180/1A
	18.0 kJ/m ² @Temperature 23.0 °C	8.57 ft-lb/in ² @Temperature 73.4 °F	80*10*4; ISO 180/1A
Charpy Impact, Notched	0.800 J/cm ² @Temperature -30.0 °C	3.81 ft-lb/in ² @Temperature -22.0 °F	V-notch Edgew 80*10*4 sp=62mm; ISO 179/1eA
	1.80 J/cm ² @Temperature 23.0 °C	8.57 ft-lb/in ² @Temperature 73.4 °F	V-notch Edgew 80*10*4 sp=62mm; ISO 179/1eA
Taber Abrasion, mg/1000 Cycles	93 @Load 1.00 kg	93 @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
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-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)	97.0 °C	207 °F	Edgew 120*10*4 sp=100mm; ISO 75/Be
Deflection Temperature at 1.8 MPa (264 psi)	85.0 °C	185 °F	Edgew 120*10*4 sp=100mm; ISO 75/Ae
Vicat Softening Point	104 °C	219 °F	Rate B/50; ISO 306
	106 °C	223 °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

Thermal Properties Flammability, UL 94	HB Metric	HB English	Comments
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	HB	HB	2nd value; UL 94
	@Thickness 2.50 mm	@Thickness 0.0984 in	
Flame Spread	25.0 mm/min	0.984 in/min	FMVSS 302
	@Thickness 1.00 mm	@Thickness 0.0394 in	
Glow Wire Test	650 °C	1200 °F	Glow Wire Flammability Index; IEC 60695-2-12
	@Thickness 1.00 mm	@Thickness 0.0394 in	

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	2.7	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	2.8	2.8	IEC 60250
	@Frequency 50.0 - 60.0 Hz	@Frequency 50.0 - 60.0 Hz	
Dielectric Strength	18.0 kV/mm	457 kV/in	in oil; IEC 60243-1
	@Thickness 3.20 mm	@Thickness 0.126 in	
	26.0 kV/mm	660 kV/in	in oil; IEC 60243-1
	@Thickness 1.60 mm	@Thickness 0.0630 in	
	35.0 kV/mm	889 kV/in	in oil; IEC 60243-1
	@Thickness 0.800 mm	@Thickness 0.0315 in	
Dissipation Factor	0.010	0.010	IEC 60250
	@Frequency 50.0 - 60.0 Hz	@Frequency 50.0 - 60.0 Hz	
	0.014	0.014	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Comparative Tracking Index	550 V	550 V	IEC 60112

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

Descriptive Properties	Value	Comments
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