

## SABIC Innovative Plastics Cyclac® G151 ABS (Europe-Africa-Middle East)

Category : Polymer , Thermoplastic , ABS Polymer , Acrylonitrile Butadiene Styrene (ABS), Unreinforced, Flame Retardant

### Material Notes:

CYCOLAC G151 is a flame retardant grade of 'new technology' CYCOLAC which has been especially formulated to minimise many of the problems often associated with the processing of traditional flame retardant ABS materials. CYCOLAC G151 has an outstanding resistance to indoor UV light. 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-G151-ABS-Europe-Africa-Middle-East.php](http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Cyclac-G151-ABS-Europe-Africa-Middle-East.php)

Physical Properties	Metric	English	Comments
Density	1.22 g/cc	0.0441 lb/in <sup>3</sup>	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	0.0040 - 0.0070 cm/cm	0.0040 - 0.0070 in/in	on tensile bar; SABIC Method
Melt Flow	18 g/10 min @Load 5.00 kg, Temperature 220 °C	18 g/10 min @Load 11.0 lb, Temperature 428 °F	ISO 1133
	80 g/10 min @Load 10.0 kg, Temperature 220 °C	80 g/10 min @Load 22.0 lb, Temperature 428 °F	ISO 1133

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	110	110	ISO 2039-2
Hardness, H358/30	90.0 MPa	13100 psi	ISO 2039-1
Tensile Strength at Break	30.0 MPa	4350 psi	5 mm/min; ISO 527
	35.0 MPa	5080 psi	50 mm/min; ISO 527
Tensile Strength, Yield	35.0 MPa	5080 psi	5 mm/min; ISO 527
	41.0 MPa	5950 psi	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	2.60 GPa	377 ksi	1 mm/min; ISO 527
Flexural Yield Strength	68.0 MPa	9860 psi	2 mm/min; ISO 178

Mechanical Properties	Metric	English	Comments
Flexural Modulus	2.60 GPa	377 ksi	2 mm/min; ISO 178
Izod Impact, Notched (ISO)	3.00 kJ/m <sup>2</sup> @Temperature -30.0 °C	1.43 ft-lb/in <sup>2</sup> @Temperature -22.0 °F	80*10*4; ISO 180/1A
	9.00 kJ/m <sup>2</sup> @Temperature 23.0 °C	4.28 ft-lb/in <sup>2</sup> @Temperature 73.4 °F	80*10*4; ISO 180/1A
Charpy Impact, Notched	0.300 J/cm <sup>2</sup> @Temperature -30.0 °C	1.43 ft-lb/in <sup>2</sup> @Temperature -22.0 °F	V-notch Edgew 80*10*4 sp=62mm; ISO 179/1eA
	0.800 J/cm <sup>2</sup> @Temperature 23.0 °C	3.81 ft-lb/in <sup>2</sup> @Temperature 73.4 °F	V-notch Edgew 80*10*4 sp=62mm; ISO 179/1eA
	0.900 J/cm <sup>2</sup> @Temperature 23.0 °C	4.28 ft-lb/in <sup>2</sup> @Temperature 73.4 °F	ISO 179/2C
Taber Abrasion, mg/1000 Cycles	130 @Load 1.00 kg	130 @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 <sup>2</sup> -°F	ISO 8302
Deflection Temperature at 0.46 MPa (66 psi)	82.0 °C	180 °F	Edgew 120*10*4 sp=100mm; ISO 75/Be
Deflection Temperature at 1.8 MPa (264 psi)	73.0 °C	163 °F	Edgew 120*10*4 sp=100mm; ISO 75/Ae
Vicat Softening Point	87.0 °C	189 °F	Rate B/50; ISO 306
	89.0 °C	192 °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-0	V-0	UL 94

Thermal Properties	@Thickness 1.50 mm Metric	@Thickness 0.0591 in English	Comments
	5VA	5VA	UL 94
	@Thickness 3.00 mm	@Thickness 0.118 in	
Oxygen Index	28 %	28 %	LOI; ISO 4589
Glow Wire Test	960 °C	1760 °F	Glow Wire Flammability Index; IEC 60695-2-12
	@Thickness 2.50 mm	@Thickness 0.0984 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	2.4	2.4	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Dielectric Strength	2.8	2.8	IEC 60250
	@Frequency 50.0 - 60.0 Hz	@Frequency 50.0 - 60.0 Hz	
Dielectric Strength	17.0 kV/mm	432 kV/in	in oil; IEC 60243-1
	@Thickness 3.20 mm	@Thickness 0.126 in	
Dissipation Factor	0.0050	0.0050	IEC 60250
	@Frequency 50.0 - 60.0 Hz	@Frequency 50.0 - 60.0 Hz	
Comparative Tracking Index	0.010	0.010	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Comparative Tracking Index	400 V	400 V	IEC 60112

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

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