

SABIC Innovative Plastics Cyclac® GPM5500 ABS (Europe-Africa-Middle East)

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

Material Notes:

CYCOLAC GPM5500 is a multi purpose injection moulding grade, providing a favourable balance of engineering properties. CYCOLAC GPM5500 has a wide processing window. It is recommended for applications in telecommunications, domestic appliance and office equipment. 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-GPM5500-ABS-Europe-Africa-Middle-East.php

Physical Properties	Metric	English	Comments
Density	1.05 g/cc	0.0379 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	24 g/10 min @Load 10.0 kg, Temperature 220 °C	24 g/10 min @Load 22.0 lb, Temperature 428 °F	ISO 1133
	24 g/10 min @Load 10.0 kg, Temperature 220 °C	24 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	110	110	ISO 2039-2
Hardness, H358/30	85.0 MPa	12300 psi	ISO 2039-1
Tensile Strength at Break	35.0 MPa	5080 psi	5 mm/min; ISO 527
	35.0 MPa	5080 psi	50 mm/min; ISO 527
Tensile Strength, Yield	40.0 MPa	5800 psi	5 mm/min; ISO 527
	45.0 MPa	6530 psi	50 mm/min; ISO 527
Elongation at Break	10 %	10 %	5 mm/min; ISO 527
	20 %	20 %	50 mm/min; ISO 527
Elongation at Yield	2.0 %	2.0 %	5 mm/min; ISO 527

Mechanical Properties	Metric	English	Comments
Tensile Modulus	2.40 GPa	348 ksi	1 mm/min; ISO 527
Flexural Yield Strength	70.0 MPa	10200 psi	2 mm/min; ISO 178
Flexural Modulus	2.30 GPa	334 ksi	2 mm/min; ISO 178
Izod Impact, Notched (ISO)	10.0 kJ/m ²	4.76 ft-lb/in ²	80*10*4; ISO 180/1A
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	18.0 kJ/m ²	8.57 ft-lb/in ²	80*10*4; ISO 180/1A
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Charpy Impact, Notched	0.800 J/cm ²	3.81 ft-lb/in ²	V-notch Edgew 80*10*4 sp=62mm; ISO 179/1eA
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	1.60 J/cm ²	7.61 ft-lb/in ²	V-notch Edgew 80*10*4 sp=62mm; ISO 179/1eA
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Taber Abrasion, mg/1000 Cycles	110	110	CS-17; SABIC Method
	@Load 1.00 kg	@Load 2.20 lb	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	80.0 µm/m-°C	44.4 µin/in-°F	ISO 11359-2
	@Temperature 23.0 - 60.0 °C	@Temperature 73.4 - 140 °F	
CTE, linear, Transverse to Flow	80.0 µm/m-°C	44.4 µin/in-°F	ISO 11359-2
	@Temperature 23.0 - 60.0 °C	@Temperature 73.4 - 140 °F	
Thermal Conductivity	0.200 W/m-K	1.39 BTU-in/hr-ft ² -°F	ISO 8302
Hot Ball Pressure Test	<= 90.0 °C	<= 194 °F	IEC 60695-10-2
Deflection Temperature at 0.46 MPa (66 psi)	89.0 °C	192 °F	Edgew 120*10*4 sp=100mm; ISO 75/Be
Deflection Temperature at 1.8 MPa (264 psi)	76.0 °C	169 °F	Edgew 120*10*4 sp=100mm; ISO 75/Ae
Vicat Softening Point	98.0 °C	208 °F	Rate B/50; ISO 306
	100 °C	212 °F	Rate B/120; ISO 306
UL RTI, Electrical	65.0 °C	149 °F	UL 746B
UL RTI, Mechanical with Impact	80.0 °C	176 °F	UL 746B

UL RTI Mechanical without Impact Thermal Properties	65.0 °C Metric	149 °F English	UL 746B Comments
Flammability, UL94	HB	HB	UL 94
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	HB	HB	2nd value; UL 94
	@Thickness 3.00 mm	@Thickness 0.118 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	2.6	2.6	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	2.7	2.7	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	0.0040	0.0040	IEC 60250
	@Frequency 50.0 - 60.0 Hz	@Frequency 50.0 - 60.0 Hz	
	0.0080	0.0080	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Comparative Tracking Index	475 V	475 V	IEC 60112

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

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