

SABIC Innovative Plastics Cyclac® MG38 ABS (Europe-Africa-Middle East)

Category : Polymer , Thermoplastic , ABS Polymer

Material Notes:

Very high impact ABS. Toughness/rigidity. Good fatigue resistance.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Cyclac-MG38-ABS-Europe-Africa-Middle-East.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.05 g/cc	1.05 g/cc	ASTM D792
Density	1.04 g/cc	0.0376 lb/in ³	ISO 1183
Viscosity	245000 cP	245000 cP	Melt Viscosity, 240°C, 1000 sec-1; ASTM D3825
Linear Mold Shrinkage, Flow	0.0050 - 0.0080 cm/cm @Thickness 3.20 mm	0.0050 - 0.0080 in/in @Thickness 0.126 in	SABIC Method
Melt Flow	3.7 g/10 min @Load 3.80 kg, Temperature 230 °C	3.7 g/10 min @Load 8.38 lb, Temperature 446 °F	ASTM D1238
	14 g/10 min @Load 10.0 kg, Temperature 220 °C	14 g/10 min @Load 22.0 lb, Temperature 428 °F	ISO 1133

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	111	111	ASTM D785
Tensile Strength at Break	33.0 MPa	4790 psi	Type I, 5 mm/min; ASTM D638
	34.0 MPa	4930 psi	50 mm/min; ISO 527
Tensile Strength, Yield	44.0 MPa	6380 psi	Type I, 5 mm/min; ASTM D638
	47.0 MPa	6820 psi	50 mm/min; ISO 527
Elongation at Break	17 %	17 %	50 mm/min; ISO 527
	26 %	26 %	Type I, 5 mm/min; ASTM D638
Elongation at Yield	2.1 %	2.1 %	Type I, 5 mm/min; ASTM D638
	2.7 %	2.7 %	50 mm/min; ISO 527
Tensile Modulus	2.27 GPa	329 ksi	5 mm/min; ASTM D638
	2.27 GPa	329 ksi	1 mm/min; ISO 527

Mechanical Properties	Metric	English	Comments
Flexural Yield Strength	72.0 MPa	10400 psi	1.3 mm/min, 50 mm span; ASTM D790
Flexural Modulus	2.25 GPa	326 ksi	2 mm/min; ISO 178
	2.34 GPa	339 ksi	1.3 mm/min, 50 mm span; ASTM D790
Izod Impact, Notched	3.70 J/cm	6.93 ft-lb/in	ASTM D256
Izod Impact, Notched (ISO)	27.0 kJ/m ²	12.8 ft-lb/in ²	80*10*4; ISO 180/1A
	9.00 kJ/m ²	4.28 ft-lb/in ²	80*10*4; ISO 180/1A
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Charpy Impact, Notched	2.80 J/cm ²	13.3 ft-lb/in ²	Edgew 80*10*4 sp=62mm; ISO 179/1eA
	1.00 J/cm ²	4.76 ft-lb/in ²	Edgew 80*10*4 sp=62mm; ISO 179/1eA
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Dart Drop, Total Energy	31.0 J	22.9 ft-lb	ASTM D3763
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	88.2 µm/m-°C	49.0 µin/in-°F	ASTM E 831
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	
CTE, linear, Transverse to Flow	86.4 µm/m-°C	48.0 µin/in-°F	ASTM E 831
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	
Deflection Temperature at 0.46 MPa (66 psi)	95.0 °C	203 °F	unannealed; ASTM D648
	@Thickness 3.20 mm	@Thickness 0.126 in	
Deflection Temperature at 1.8 MPa (264 psi)	81.0 °C	178 °F	Flatw 80*10*4 sp=64mm; ISO 75/Af
	80.0 °C	176 °F	unannealed; ASTM D648
	@Thickness 3.20 mm	@Thickness 0.126 in	
Vicat Softening Point	98.0 °C	208 °F	Rate B/50; ASTM D1525
	98.0 °C	208 °F	Rate B/50; ISO 306
	100 °C	212 °F	Rate B/120; ISO 306
UL RTI, Electrical	60.0 °C	140 °F	UL 746B

Thermal Properties UL RTI, Mechanical with Impact	Metric 60.0 °C	English 140 °F	Comments 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

Electrical Properties	Metric	English	Comments
Arc Resistance	120 - 180 sec	120 - 180 sec	Tungsten; ASTM D495
Comparative Tracking Index	>= 600 V	>= 600 V	UL 746A
Hot Wire Ignition, HWI	15 - 30 sec	15 - 30 sec	UL 746A
High Amp Arc Ignition, HAI	>= 120 arcs	>= 120 arcs	UL 746A
High Voltage Arc-Tracking Rate, HVTR	25.4 - 80.0 mm/min	1.00 - 3.15 in/min	UL 746A

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