

SABIC Innovative Plastics Cycolac® MG38F ABS

Category : Polymer , Thermoplastic , ABS Polymer

Material Notes:

Very high impact ABS. Toughness/rigidity. FDA compliant.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Cycolac-MG38F-ABS.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.05 g/cc	1.05 g/cc	ASTM D792
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
	15 g/10 min @Load 10.0 kg, Temperature 220 °C	15 g/10 min @Load 22.0 lb, Temperature 428 °F	ISO 1133

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	33.0 MPa	4790 psi	Type I, 5 mm/min; ASTM D638
Tensile Strength, Yield	43.0 MPa	6240 psi	Type I, 5 mm/min; ASTM D638
Elongation at Break	26 %	26 %	Type I, 5 mm/min; ASTM D638
Elongation at Yield	2.1 %	2.1 %	Type I, 5 mm/min; ASTM D638
Tensile Modulus	2.13 GPa	309 ksi	5 mm/min; ASTM D638
Flexural Yield Strength	68.0 MPa	9860 psi	1.3 mm/min, 50 mm span; ASTM D790
Flexural Modulus	2.20 GPa	319 ksi	1.3 mm/min, 50 mm span; ASTM D790
Izod Impact, Notched	3.73 J/cm	6.99 ft-lb/in	ASTM D256
Dart Drop, Total Energy	31.0 J @Temperature 23.0 °C	22.9 ft-lb @Temperature 73.4 °F	ASTM D3763

Thermal Properties	Metric	English	Comments
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Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	88.2 $\mu\text{m}/\text{m}\cdot^\circ\text{C}$ @Temperature -40.0 - 40.0 $^\circ\text{C}$	49.0 $\mu\text{in}/\text{in}\cdot^\circ\text{F}$ @Temperature -40.0 - 104 $^\circ\text{F}$	ASTM E 831
CTE, linear, Transverse to Flow	86.4 $\mu\text{m}/\text{m}\cdot^\circ\text{C}$ @Temperature -40.0 - 40.0 $^\circ\text{C}$	48.0 $\mu\text{in}/\text{in}\cdot^\circ\text{F}$ @Temperature -40.0 - 104 $^\circ\text{F}$	ASTM E 831
Deflection Temperature at 0.46 MPa (66 psi)	97.0 $^\circ\text{C}$ @Thickness 3.20 mm	207 $^\circ\text{F}$ @Thickness 0.126 in	unannealed; ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	82.0 $^\circ\text{C}$ @Thickness 3.20 mm	180 $^\circ\text{F}$ @Thickness 0.126 in	unannealed; ASTM D648
Vicat Softening Point	98.0 $^\circ\text{C}$	208 $^\circ\text{F}$	Rate B/50; ASTM D1525
UL RTI, Electrical	60.0 $^\circ\text{C}$	140 $^\circ\text{F}$	UL 746B
UL RTI, Mechanical with Impact	60.0 $^\circ\text{C}$	140 $^\circ\text{F}$	UL 746B
UL RTI, Mechanical without Impact	60.0 $^\circ\text{C}$	140 $^\circ\text{F}$	UL 746B
Flammability, UL94	HB @Thickness 1.52 mm	HB @Thickness 0.0598 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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