

SABIC Innovative Plastics Cycolac® MG47N ABS

Category : Polymer , Thermoplastic , ABS Polymer

Material Notes:

Multi-purpose, injection molding ABS providing a favorable balance of engineering properties. NSF Standard Multi-purpose, injection molding ABS providing a favorable balance of engineering properties. NSF Standard 61 certified in limited colors (restrictions may apply).

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Cycolac-MG47N-ABS.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.04 g/cc	1.04 g/cc	ASTM D792
Viscosity	225000 cP	225000 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	5.6 g/10 min @Load 3.80 kg, Temperature 230 °C	5.6 g/10 min @Load 8.38 lb, Temperature 446 °F	ASTM D1238
	18 g/10 min @Load 10.0 kg, Temperature 220 °C	18 g/10 min @Load 22.0 lb, Temperature 428 °F	ISO 1133

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	34.0 MPa	4930 psi	Type I, 5 mm/min; ASTM D638
Tensile Strength, Yield	44.0 MPa	6380 psi	Type I, 5 mm/min; ASTM D638
Elongation at Break	24 %	24 %	Type I, 5 mm/min; ASTM D638
Elongation at Yield	2.0 %	2.0 %	Type I, 5 mm/min; ASTM D638
Tensile Modulus	2.27 GPa	329 ksi	5 mm/min; ASTM D638
Flexural Yield Strength	72.0 MPa	10400 psi	1.3 mm/min, 50 mm span; ASTM D790
Flexural Modulus	2.34 GPa	339 ksi	1.3 mm/min, 50 mm span; ASTM D790
Izod Impact, Notched	3.20 J/cm	5.99 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
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	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
Deflection Temperature at 0.46 MPa (66 psi)	94.0 $^{\circ}\text{C}$ @Thickness 3.20 mm	201 $^{\circ}\text{F}$ @Thickness 0.126 in	unannealed; ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	80.0 $^{\circ}\text{C}$ @Thickness 3.20 mm	176 $^{\circ}\text{F}$ @Thickness 0.126 in	unannealed; ASTM D648
Vicat Softening Point	99.0 $^{\circ}\text{C}$	210 $^{\circ}\text{F}$	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	60 - 120 sec	60 - 120 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	80.0 - 150 mm/min	3.15 - 5.91 in/min	UL 746A

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