

SABIC Innovative Plastics Cycolac® MG38U ABS

Category : Polymer , Thermoplastic , ABS Polymer

Material Notes:

High impact ABS. UL 746C f1 listed. Toughness/rigidity. Good fatigue resistance.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Cycolac-MG38U-ABS.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.05 g/cc	1.05 g/cc	ASTM D792
Density	1.05 g/cc	0.0379 lb/in ³	ISO 1183
Moisture Absorption	0.200 %	0.200 %	23°C / 50% RH; ISO 62
Water Absorption at Saturation	1.0 %	1.0 %	ISO 62
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	15 g/10 min @Load 10.0 kg, Temperature 220 °C	15 g/10 min @Load 22.0 lb, Temperature 428 °F	ISO 1133
Melt Index of Compound	5.0 g/10 min @Load 5.00 kg, Temperature 220 °C	5.0 g/10 min @Load 11.0 lb, Temperature 428 °F	MVR [cm ³ /10 min]; ISO 1133

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	33.0 MPa	4790 psi	5 mm/min; ISO 527
	36.0 MPa	5220 psi	Type I, 5 mm/min; ASTM D638
Tensile Strength, Yield	41.0 MPa	5950 psi	5 mm/min; ISO 527
	43.0 MPa	6240 psi	Type I, 5 mm/min; ASTM D638
Elongation at Break	30 %	30 %	5 mm/min; ISO 527
	98 %	98 %	Type I, 5 mm/min; ASTM D638
Elongation at Yield	2.5 %	2.5 %	5 mm/min; ISO 527
	2.9 %	2.9 %	Type I, 5 mm/min; ASTM D638
Tensile Modulus	2.39 GPa	347 ksi	5 mm/min; ASTM D638
	2.41 GPa	350 ksi	1 mm/min; ISO 527

Mechanical Properties	Metric	English	Comments
Charcoal Yield Strength	76.0 MPa	11000 psi	1.3 mm/min, 50 mm span; ASTM D790
Flexural Modulus	2.31 GPa	335 ksi	2 mm/min; ISO 178
	2.41 GPa	350 ksi	1.3 mm/min, 50 mm span; ASTM D790
Izod Impact, Notched	3.74 J/cm	7.01 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
Dart Drop, Total Energy	32.0 J	23.6 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	
	88.2 µm/m-°C	49.0 µin/in-°F	ISO 11359-2
	@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	
	86.4 µm/m-°C	48.0 µin/in-°F	ISO 11359-2
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	
Deflection Temperature at 0.46 MPa (66 psi)	97.0 °C	207 °F	unannealed; ASTM D648
	@Thickness 3.20 mm	@Thickness 0.126 in	
Deflection Temperature at 1.8 MPa (264 psi)	80.0 °C	176 °F	Flatw 80*10*4 sp=64mm; ISO 75/Af
	82.0 °C	180 °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
	99.0 °C	210 °F	Rate B/120; ISO 306
Flammability, UL94	HB	HB	UL 94
	@Thickness 1.50 mm	@Thickness 0.0591 in	

Thermal Properties

Metric

English

Comments

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