

SABIC Innovative Plastics Cycolac® HMG94MD ABS

Category : Polymer , Thermoplastic , ABS Polymer

Material Notes:

Superior flow, injection molding ABS for medical applications. Good impact. For thin-wall applications. Biocompatible (ISO10993). FDA compliant. Gamma & EtO sterilizable.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Cycolac-HMG94MD-ABS.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.04 g/cc	1.04 g/cc	ASTM D792
Density	1.06 g/cc	0.0383 lb/in ³	ISO 1183
Viscosity	172000 cP	172000 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	11.7 g/10 min @Load 3.80 kg, Temperature 230 °C	11.7 g/10 min @Load 8.38 lb, Temperature 446 °F	ASTM D1238
	12 g/10 min @Load 5.00 kg, Temperature 220 °C	12 g/10 min @Load 11.0 lb, Temperature 428 °F	ISO 1133

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	35.0 MPa	5080 psi	Type I, 5 mm/min; ASTM D638
	35.0 MPa	5080 psi	5 mm/min; ISO 527
Tensile Strength, Yield	40.0 MPa	5800 psi	5 mm/min; ISO 527
	46.0 MPa	6670 psi	Type I, 5 mm/min; ASTM D638
Elongation at Break	18 %	18 %	Type I, 5 mm/min; ASTM D638
	35 %	35 %	5 mm/min; ISO 527
Elongation at Yield	2.0 %	2.0 %	Type I, 5 mm/min; ASTM D638
	2.0 %	2.0 %	5 mm/min; ISO 527
Tensile Modulus	2.45 GPa	355 ksi	1 mm/min; ISO 527
	2.48 GPa	360 ksi	5 mm/min; ASTM D638

Mechanical Properties	Metric	English	Comments
	79.0 MPa	11500 psi	1.3 mm/min, 50 mm span; ASTM D790
Flexural Modulus	2.50 GPa	363 ksi	2 mm/min; ISO 178
	2.62 GPa	380 ksi	1.3 mm/min, 50 mm span; ASTM D790
Izod Impact, Notched	2.40 J/cm	4.50 ft-lb/in	ASTM D256
	0.800 J/cm	1.50 ft-lb/in	ASTM D256
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Izod Impact, Notched (ISO)	16.0 kJ/m ²	7.61 ft-lb/in ²	80*10*4; ISO 180/1A
	7.00 kJ/m ²	3.33 ft-lb/in ²	80*10*4; ISO 180/1A
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Charpy Impact, Notched	2.30 J/cm ²	10.9 ft-lb/in ²	Edgew 80*10*4 sp=62mm; ISO 179/1eA
Dart Drop, Total Energy	21.0 J	15.5 ft-lb	ASTM D3763
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	88.0 µm/m-°C	48.9 µin/in-°F	ISO 11359-2
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	
CTE, linear, Transverse to Flow	85.0 µm/m-°C	47.2 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)	93.0 °C	199 °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
	77.0 °C	171 °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

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