

SABIC Innovative Plastics Cycolac® MG34LGHF ABS

Category : Polymer , Thermoplastic , ABS Polymer , Acrylonitrile Butadiene Styrene (ABS), Molded

Material Notes:

Low gloss, high flow ABS for unpainted interior applications. This data was supplied by SABIC-IP for the Americas region.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Cycolac-MG34LGHF-ABS.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.04 g/cc	1.04 g/cc	ASTM D 792
Density	1.03 g/cc	0.0372 lb/in ³	ISO 1183
Moisture Absorption at Equilibrium	0.20 %	0.20 %	23°C / 50% RH; ISO 62
Water Absorption at Saturation	1.0 % @Temperature 23.0 °C	1.0 % @Temperature 73.4 °F	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
Linear Mold Shrinkage, Transverse	0.0050 - 0.0080 cm/cm @Thickness 3.20 mm	0.0050 - 0.0080 in/in @Thickness 0.126 in	SABIC Method
Melt Flow	12 g/10 min @Load 3.80 kg, Temperature 230 °C	12 g/10 min @Load 8.38 lb, Temperature 446 °F	ASTM D 1238
	40 g/10 min @Load 10.0 kg, Temperature 220 °C	40 g/10 min @Load 22.0 lb, Temperature 428 °F	[cm ³ /10 min] Melt Volume Rate; ISO 1133

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	31.0 MPa	4500 psi	5 mm/min; ISO 527
	32.0 MPa	4640 psi	Type I, 5 mm/min; ASTM D 638
Tensile Strength, Yield	38.0 MPa	5510 psi	5 mm/min; ISO 527
	39.0 MPa	5660 psi	Type I, 5 mm/min; ASTM D 638
Elongation at Break	25 %	25 %	Type I, 5 mm/min; ASTM D 638
	25 %	25 %	5 mm/min; ISO 527
Elongation at Yield	2.0 %	2.0 %	Type I, 5 mm/min; ASTM D 638

Mechanical Properties	2.0 % Metric	2.0 % English	5 mm/min; ISO 527 Comments
Tensile Modulus	2.13 GPa	309 ksi	5 mm/min; ASTM D 638
	2.26 GPa	328 ksi	1 mm/min; ISO 527
Flexural Yield Strength	61.0 MPa	8850 psi	2 mm/min; ISO 178
	62.0 MPa	8990 psi	1.3 mm/min, 50 mm span; ASTM D 790
Flexural Modulus	2.13 GPa	309 ksi	1.3 mm/min, 50 mm span; ASTM D 790
	2.14 GPa	310 ksi	2 mm/min; ISO 178
Izod Impact, Notched	0.370 J/cm @Temperature -30.0 °C	0.693 ft-lb/in @Temperature -22.0 °F	ASTM D 256
	2.13 J/cm @Temperature 23.0 °C	3.99 ft-lb/in @Temperature 73.4 °F	ASTM D 256
Izod Impact, Notched (ISO)	4.00 kJ/m ² @Temperature -30.0 °C	1.90 ft-lb/in ² @Temperature -22.0 °F	80*10*4; ISO 180/1A
	16.0 kJ/m ² @Temperature 23.0 °C	7.61 ft-lb/in ² @Temperature 73.4 °F	80*10*4; ISO 180/1A
Charpy Impact, Notched	1.60 J/cm ² @Temperature 23.0 °C	7.61 ft-lb/in ² @Temperature 73.4 °F	V-notch Edgew 80*10*4 sp=62mm; ISO 179/1eA
Impact Test	25.0 J @Temperature 23.0 °C	18.4 ft-lb @Temperature 73.4 °F	Instrumented Impact Total Energy; ASTM D 3763

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	93.6 µm/m-°C @Temperature -40.0 - 40.0 °C	52.0 µin/in-°F @Temperature -40.0 - 104 °F	ASTM E 831
	93.6 µm/m-°C @Temperature -40.0 - 40.0 °C	52.0 µin/in-°F @Temperature -40.0 - 104 °F	ISO 11359-2
CTE, linear, Transverse to Flow	93.6 µm/m-°C @Temperature -40.0 - 40.0 °C	52.0 µin/in-°F @Temperature -40.0 - 104 °F	ASTM E 831
	93.6 µm/m-°C @Temperature -40.0 -	52.0 µin/in-°F @Temperature -40.0 -	ISO 11359-2

Thermal Properties	40.0 °C Metric	104 °F English	Comments
Deflection Temperature at 1.8 MPa (264 psi)	81.0 °C	178 °F	Flatw 80*10*4 sp=64mm; ISO 75/Af
	82.0 °C	180 °F	unannealed; ASTM D 648
	@Thickness 3.20 mm	@Thickness 0.126 in	
Vicat Softening Point	97.0 °C	207 °F	Rate B/50; ISO 306
	98.0 °C	208 °F	Rate B/50; ASTM D 1525
	101 °C	214 °F	Rate B/120; ISO 306

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