

SABIC Innovative Plastics Cyclac® MG8000SR ABS

Category : Polymer , Thermoplastic , ABS Polymer

Material Notes:

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-Cyclac-MG8000SR-ABS.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.06 g/cc	1.06 g/cc	ASTM D 792
Density	1.07 g/cc	0.0387 lb/in ³	ISO 1183
Linear Mold Shrinkage, Flow	0.0040 - 0.0070 cm/cm	0.0040 - 0.0070 in/in	SABIC Method
	@Thickness 3.20 mm	@Thickness 0.126 in	
Melt Flow	25 g/10 min	25 g/10 min	ASTM D 1238
	@Load 10.0 kg, Temperature 220 °C	@Load 22.0 lb, Temperature 428 °F	
	25 g/10 min	25 g/10 min	[cm ³ /10 min] Melt Volume Rate; ISO 1133
	@Load 10.0 kg, Temperature 220 °C	@Load 22.0 lb, Temperature 428 °F	
	33 g/10 min	33 g/10 min	[cm ³ /10 min] Melt Volume Rate; ISO 1133
	@Load 5.00 kg, Temperature 260 °C	@Load 11.0 lb, Temperature 500 °F	

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell L	87	87	ISO 2039-2
Hardness, H358/30	100 MPa	14500 psi	ISO 2039-1
Hardness, Shore D	78	78	ASTM D 2240
Tensile Strength at Break	34.0 MPa	4930 psi	Type I, 5 mm/min; ASTM D 638
	35.0 MPa	5080 psi	5 mm/min; ISO 527
	37.0 MPa	5370 psi	Type I, 50 mm/min; ASTM D 638
	39.0 MPa	5660 psi	50 mm/min; ISO 527
	50.0 MPa	7250 psi	5 mm/min; ISO 527
Tensile Strength, Yield	51.0 MPa	7400 psi	Type I, 5 mm/min; ASTM D 638
	56.0 MPa	8120 psi	50 mm/min; ISO 527

Mechanical Properties	Metric	English	Comments
Elongation at Break	8.0 %	8.0 %	50 mm/min; ISO 527
	9.0 %	9.0 %	Type I, 50 mm/min; ASTM D 638
	10 %	10 %	Type I, 5 mm/min; ASTM D 638
	10 %	10 %	5 mm/min; ISO 527
Elongation at Yield	2.8 %	2.8 %	Type I, 5 mm/min; ASTM D 638
	2.8 %	2.8 %	5 mm/min; ISO 527
	3.0 %	3.0 %	50 mm/min; ISO 527
	3.0 %	3.0 %	Type I, 50 mm/min; ASTM D 638
Tensile Modulus	2.60 GPa	377 ksi	1 mm/min; ISO 527
	2.65 GPa	384 ksi	5 mm/min; ASTM D 638
	2.67 GPa	387 ksi	50 mm/min; ASTM D 638
Flexural Yield Strength	77.0 MPa	11200 psi	1.3 mm/min, 50 mm span; ASTM D 790
	80.0 MPa	11600 psi	2 mm/min; ISO 178
Flexural Modulus	2.60 GPa	377 ksi	1.3 mm/min, 50 mm span; ASTM D 790
	2.70 GPa	392 ksi	2 mm/min; ISO 178
Izod Impact, Notched	0.600 J/cm	1.12 ft-lb/in	ASTM D 256
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	0.800 J/cm	1.50 ft-lb/in	ASTM D 256
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Izod Impact, Notched (ISO)	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	
	12.0 kJ/m ²	5.71 ft-lb/in ²	80*10*4; ISO 180/1A
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Charpy Impact, Notched	0.800 J/cm ²	3.81 ft-lb/in ²	V-notch Edgew 80*10*4 sp=62mm; ISO 179/1eA
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	1.30 J/cm ²	6.19 ft-lb/in ²	V-notch Edgew 80*10*4 sp=62mm; ISO 179/1eA
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Impact Test Mechanical Properties	10.0 J Metric	7.38 ft-lb English	Multiaxial Impact; ISO 6603 Comments
	25.0 J	18.4 ft-lb	Instrumented Impact Total Energy; ASTM D 3763
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	87.0 µm/m-°C	48.3 µin/in-°F	ASTM E 831
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	
	87.0 µm/m-°C	48.3 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	ASTM E 831
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	
	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)	87.0 °C	189 °F	Flatw 80*10*4 sp=64mm; ISO 75/Bf
Deflection Temperature at 1.8 MPa (264 psi)	77.0 °C	171 °F	Flatw 80*10*4 sp=64mm; ISO 75/Af
	83.0 °C	181 °F	unannealed; ASTM D 648
	@Thickness 3.20 mm	@Thickness 0.126 in	
Vicat Softening Point	89.0 °C	192 °F	Rate B/50; ASTM D 1525
	91.0 °C	196 °F	Rate B/50; ISO 306
	92.0 °C	198 °F	Rate B/120; ISO 306
	98.0 °C	208 °F	Rate A/50; ISO 306
Flammability, UL94	HB	HB	UL 94 by SABIC-IP
	@Thickness 1.50 mm	@Thickness 0.0591 in	

Descriptive Properties	Value	Comments
Pencil Hardness test, 1kgf	HB	ASTM D 3363

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