

SABIC Innovative Plastics Cycloc® EX58 ABS

Category : Polymer , Thermoplastic , ABS Polymer

Material Notes:

High impact ABS for sheet extrusion and blow molding applications.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Cycloc-EX58-ABS.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.03 g/cc	1.03 g/cc	ASTM D792
Density	1.03 g/cc	0.0372 lb/in ³	ISO 1183
Viscosity	1.40e+6 cP	1.40e+6 cP	Melt Viscosity, 240°C, 100 sec-1; ASTM D3825
Linear Mold Shrinkage, Flow	0.0060 - 0.0080 cm/cm @Thickness 3.20 mm	0.0060 - 0.0080 in/in @Thickness 0.126 in	SABIC Method
Melt Index of Compound	4.0 g/10 min @Load 10.0 kg, Temperature 220 °C	4.0 g/10 min @Load 22.0 lb, Temperature 428 °F	MVR [cm ³ /10 min]; ISO 1133

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	30.0 MPa	4350 psi	Type I, 5 mm/min; ASTM D638
	30.0 MPa	4350 psi	50 mm/min; ISO 527
Tensile Strength, Yield	39.0 MPa	5660 psi	Type I, 5 mm/min; ASTM D638
	39.0 MPa	5660 psi	50 mm/min; ISO 527
Elongation at Break	24.4 %	24.4 %	50 mm/min; ISO 527
	31.6 %	31.6 %	Type I, 5 mm/min; ASTM D638
Elongation at Yield	2.6 %	2.6 %	50 mm/min; ISO 527
	3.1 %	3.1 %	Type I, 5 mm/min; ASTM D638
Tensile Modulus	2.08 GPa	302 ksi	5 mm/min; ASTM D638
Flexural Yield Strength	66.0 MPa	9570 psi	1.3 mm/min, 50 mm span; ASTM D790
Flexural Modulus	2.16 GPa	313 ksi	1.3 mm/min, 50 mm span; ASTM D790
Izod Impact, Notched	4.32 J/cm	8.09 ft-lb/in	ASTM D256

Mechanical Properties	^{2.99 J/cm} Metric	^{5.60 ft-lb/in} English	Comments
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Izod Impact, Notched (ISO)	34.0 kJ/m ²	16.2 ft-lb/in ²	80*10*4; ISO 180/1A
	22.0 kJ/m ²	10.5 ft-lb/in ²	80*10*4; ISO 180/1A
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Charpy Impact, Notched	3.60 J/cm ²	17.1 ft-lb/in ²	Edgew 80*10*4 sp=62mm; ISO 179/1eA
Dart Drop, Total Energy	37.0 J	27.3 ft-lb	ASTM D3763
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	101 µm/m-°C	56.1 µin/in-°F	ASTM E 831
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	
CTE, linear, Transverse to Flow	104 µm/m-°C	57.8 µin/in-°F	ASTM E 831
	@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)	78.0 °C	172 °F	Flatw 80*10*4 sp=64mm; ISO 75/Af
	80.0 °C	176 °F	unannealed; ASTM D648
	@Thickness 3.20 mm	@Thickness 0.126 in	
Vicat Softening Point	92.0 °C	198 °F	Rate B/50; ISO 306
	96.0 °C	205 °F	Rate B/120; ISO 306
	106 °C	223 °F	Rate B/50; ASTM D1525
UL RTI, Electrical	60.0 °C	140 °F	UL 746B
UL RTI, Mechanical with Impact	60.0 °C	140 °F	UL 746B
UL RTI, Mechanical without Impact	60.0 °C	140 °F	UL 746B
Flammability, UL94	HB	HB	UL 94
	@Thickness 1.52 mm	@Thickness 0.0598 in	

Electrical Properties	Metric	English	Comments
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Arc Resistance Electrical Properties	120 - 180 sec Metric	120 - 180 sec English	Tungsten ASTM D495 Comments
Comparative Tracking Index	>= 600 V	>= 600 V	UL 746A
Hot Wire Ignition, HWI	7.0 - 15 sec	7.0 - 15 sec	UL 746A
High Amp Arc Ignition, HAI	0.00 - 15 arcs	0.00 - 15 arcs	UL 746A
High Voltage Arc-Tracking Rate, HVTR	10.0 - 25.4 mm/min	0.394 - 1.00 in/min	UL 746A

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