

CYCOLAC™ MG38F resin

Acrylonitrile Butadiene Styrene

SABIC Innovative Plastics

Message:

Very high impact ABS. Toughness/rigidity. FDA compliant.

General Information			
UL YellowCard	E45329-102071273	E45329-102071274	
Features	Ultra-high impact resistance		
	Good toughness		
	Compliance of Food Exposure		
	Medium hardness		
Agency Ratings	FDA not rated		
RoHS Compliance	RoHS compliance		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.05	g/cm ³	ASTM D792
Melt Mass-Flow Rate (MFR)			
230°C/3.8 kg	3.7	g/10 min	ASTM D1238
220°C/10.0 kg	15	g/10 min	ISO 1133
Molding Shrinkage - Flow (3.20 mm)	0.50 - 0.80	%	Internal method
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus ¹	2140	MPa	ASTM D638
Tensile Strength ²			ASTM D638
Yield	43.4	MPa	ASTM D638
Fracture	33.1	MPa	ASTM D638
Tensile Elongation ³			ASTM D638
Yield	2.1	%	ASTM D638
Fracture	26	%	ASTM D638
Flexural Modulus ⁴ (50.0 mm Span)	2210	MPa	ASTM D790
Flexural Strength ⁵ (Yield, 50.0 mm Span)	68.9	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (23°C)	370	J/m	ASTM D256
Instrumented Dart Impact (23°C, Total Energy)	31.9	J	ASTM D3763
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
0.45 MPa, unannealed, 3.20mm	97.2	°C	ASTM D648
1.8 MPa, unannealed, 3.20mm	82.2	°C	ASTM D648

Vicat Softening Temperature	98.9	°C	ASTM D1525 ⁶
Linear thermal expansion coefficient			ASTM E831
Flow: -40 to 40°C	8.8E-5	cm/cm/°C	ASTM E831
Lateral: -40 to 40°C	8.6E-5	cm/cm/°C	ASTM E831
RTI Elec	60.0	°C	UL 746
RTI Imp	60.0	°C	UL 746
RTI	60.0	°C	UL 746
Electrical	Nominal Value		Test Method
Arc Resistance ⁷	PLC 5		ASTM D495
Comparative Tracking Index (CTI)	PLC 0		UL 746
High Amp Arc Ignition (HAI)	PLC 0		UL 746
High Voltage Arc Tracking Rate (HVTR)	PLC 2		UL 746
Hot-wire Ignition (HWI)	PLC 3		UL 746
Flammability	Nominal Value		Test Method
Flame Rating (1.52 mm)	HB		UL 94
Fill Analysis	Nominal Value	Unit	Test Method
Melt Viscosity (240°C, 1000 sec ⁻¹)	245	Pa·s	ASTM D3835
Injection	Nominal Value	Unit	
Drying Temperature	82.2 - 93.3	°C	
Drying Time	2.0 - 4.0	hr	
Drying Time, Maximum	8.0	hr	
Suggested Max Moisture	0.10	%	
Suggested Shot Size	50 - 70	%	
Rear Temperature	188 - 210	°C	
Middle Temperature	204 - 227	°C	
Front Temperature	216 - 238	°C	
Nozzle Temperature	218 - 260	°C	
Processing (Melt) Temp	218 - 260	°C	
Mold Temperature	48.9 - 71.1	°C	
Back Pressure	0.345 - 0.689	MPa	
Screw Speed	30 - 60	rpm	
Vent Depth	0.038 - 0.051	mm	
NOTE			
1.	5.0 mm/min		
2.	Type 1, 5.0 mm/min		
3.	Type 1, 5.0 mm/min		
4.	1.3 mm/min		
5.	1.3 mm/min		
6.	标准 B (120°C/h), 载荷2 (50N)		
7.	Tungsten electrode		

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Recommended distributors for this material

Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China

