

CYCOLAC™ MG38F resin

Acrylonitrile Butadiene Styrene

SABIC Innovative Plastics

Message:

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

General Information			
UL YellowCard	E121562-220711	E121562-220712	
Features	Good Toughness		
	Medium Rigidity		
	Ultra High Impact Resistance		
Agency Ratings	FDA Unspecified Rating		
Processing Method	Injection Molding		
Multi-Point Data	Flexural DMA (ASTM D4065)		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.05	g/cm³	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 to 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	
Break	33.1	MPa	
Tensile Elongation ³			ASTM D638
Yield	2.1	%	
Break	26	%	
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, 3.20 mm	97.2	°C	
1.8 MPa, Unannealed, 3.20 mm	82.2	°C	
Vicat Softening Temperature	98.9	°C	ASTM D1525 ⁶

CLTE			ASTM E831
Flow : -40 to 40°C	8.8E-5	cm/cm/°C	
Transverse : -40 to 40°C	8.6E-5	cm/cm/°C	
RTI Elec	60.0	°C	UL 746
RTI Imp	60.0	°C	UL 746
RTI Str	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 to 93.3	°C	
Drying Time	2.0 to 4.0	hr	
Drying Time, Maximum	8.0	hr	
Suggested Max Moisture	0.10	%	
Suggested Shot Size	50 to 70	%	
Rear Temperature	188 to 210	°C	
Middle Temperature	204 to 227	°C	
Front Temperature	216 to 238	°C	
Nozzle Temperature	218 to 260	°C	
Processing (Melt) Temp	218 to 260	°C	
Mold Temperature	48.9 to 71.1	°C	
Back Pressure	0.345 to 0.689	MPa	
Screw Speed	30 to 60	rpm	
Vent Depth	0.038 to 0.051	mm	
NOTE			
1.	5.0 mm/min		
2.	Type I, 5.0 mm/min		
3.	Type I, 5.0 mm/min		
4.	1.3 mm/min		
5.	1.3 mm/min		
6.	Rate B (120°C/h), Loading 2 (50 N)		
7.	Tungsten Electrode		

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