

CYCOLAC™ MG38U resin

Acrylonitrile Butadiene Styrene

SABIC Innovative Plastics

Message:

High impact ABS. UL 746C f1 listed. Toughness/rigidity. Good fatigue resistance.

General Information			
UL YellowCard	E45329-102071275		
Features	Impact resistance, high		
	Fatigue resistance		
	Good toughness		
	Medium hardness		
RoHS Compliance	RoHS compliance		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.05	g/cm ³	ASTM D792, ISO 1183
Melt Mass-Flow Rate (MFR) (220°C/10.0 kg)	15	g/10 min	ISO 1133
Melt Volume-Flow Rate (MVR) (220°C/5.0 kg)	5.00	cm ³ /10min	ISO 1133
Molding Shrinkage - Flow (3.20 mm)	0.50 - 0.80	%	Internal method
Water Absorption			ISO 62
Saturated, 23°C	1.0	%	ISO 62
Equilibrium, 23°C, 50% RH	0.20	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ¹	2390	MPa	ASTM D638
--	2420	MPa	ISO 527-2/1
Tensile Strength			
Yield ²	43.8	MPa	ASTM D638
Yield	41.0	MPa	ISO 527-2/5
Fracture ³	36.2	MPa	ASTM D638
Fracture	33.0	MPa	ISO 527-2/5
Tensile Elongation			
Yield ⁴	2.9	%	ASTM D638
Yield	2.5	%	ISO 527-2/5
Fracture ⁵	98	%	ASTM D638
Fracture	30	%	ISO 527-2/5
Flexural Modulus			
50.0mm span ⁶	2410	MPa	ASTM D790

-- ⁷	2310	MPa	ISO 178
Flexural Stress			
--	70.0	MPa	ISO 178
Yield, 50.0mm span ⁸	76.0	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact			
23°C	370	J/m	ASTM D256
23°C ⁹	27	kJ/m ²	ISO 180/1A
Instrumented Dart Impact (23°C, Total Energy)	32.0	J	ASTM D3763
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, unannealed, 3.20mm	97.0	°C	ASTM D648
1.8 MPa, unannealed, 3.20mm	82.0	°C	ASTM D648
1.8 MPa, unannealed, 64.0mm span ¹⁰	80.0	°C	ISO 75-2/Af
Vicat Softening Temperature			
--	98.0	°C	ASTM D1525, ISO 306/B50 10 ¹¹
--	99.0	°C	ISO 306/B120
Linear thermal expansion coefficient			ASTM E831, ISO 11359-2
Flow: -40 to 40°C	8.8E-5	cm/cm/°C	ASTM E831, ISO 11359-2
Lateral: -40 to 40°C	8.6E-5	cm/cm/°C	ASTM E831, ISO 11359-2
Flammability	Nominal Value	Test Method	
Flame Rating (1.50 mm)	HB	UL 94	
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.	Type 1, 5.0 mm/min
5.	Type 1, 5.0 mm/min
6.	1.3 mm/min
7.	2.0 mm/min
8.	1.3 mm/min
9.	80*10*4
10.	80*10*4 mm
11.	标准 B (120°C/h), 载荷2 (50N)

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