

CYCOLAC™ MG94U resin

Acrylonitrile Butadiene Styrene

SABIC Innovative Plastics

Message:

High flow, UV stabilized ABS molding grade

General Information			
UL YellowCard	E121562-548786		
Additive	UV Stabilizer		
Features	High Flow		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity			
--	1.04	g/cm ³	ASTM D792
--	1.06	g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR) (230°C/3.8 kg)	12	g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR) (220°C/5.0 kg)	12.5	cm ³ /10min	ISO 1133
Molding Shrinkage - Flow (3.20 mm)	0.50 to 0.80	%	Internal Method
Water Absorption			ISO 62
Saturation, 23°C	0.50	%	
Equilibrium, 23°C, 50% RH	0.16	%	
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ¹	2480	MPa	ASTM D638
--	2450	MPa	ISO 527-2/1
Tensile Strength			
Yield ²	46.9	MPa	ASTM D638
Yield	40.0	MPa	ISO 527-2/5
Break ³	35.9	MPa	ASTM D638
Break	35.0	MPa	ISO 527-2/5
Tensile Elongation			
Yield ⁴	2.0	%	ASTM D638
Yield	2.0	%	ISO 527-2/5
Break ⁵	18	%	ASTM D638
Break	35	%	ISO 527-2/5
Flexural Modulus			
50.0 mm Span ⁶	2620	MPa	ASTM D790
-- ⁷	2500	MPa	ISO 178
Flexural Stress			

--	65.0	MPa	ISO 178
Yield, 50.0 mm Span ⁸	79.3	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength ⁹ (23°C)	23	kJ/m ²	ISO 179/1eA
Notched Izod Impact			
-30°C	80	J/m	ASTM D256
23°C	240	J/m	ASTM D256
-30°C ¹⁰	7.0	kJ/m ²	ISO 180/1A
23°C ¹¹	18	kJ/m ²	ISO 180/1A
Instrumented Dart Impact (23°C, Total Energy)	21.0	J	ASTM D3763
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, Unannealed, 3.20 mm	95.6	°C	ASTM D648
1.8 MPa, Unannealed, 3.20 mm	82.2	°C	ASTM D648
1.8 MPa, Unannealed, 64.0 mm Span ¹²	82.0	°C	ISO 75-2/Af
Vicat Softening Temperature			
--	98.9	°C	ASTM D1525 ¹³
--	99.0	°C	ISO 306/B50
--	100	°C	ISO 306/B120
CLTE			ASTM E831, ISO 11359-2
Flow : -40 to 40°C	8.8E-5	cm/cm/°C	
Transverse : -40 to 40°C	8.5E-5	cm/cm/°C	
Injection	Nominal Value	Unit	
Drying Temperature	82.2 to 87.8	°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 199	°C	
Middle Temperature	199 to 210	°C	
Front Temperature	204 to 227	°C	
Nozzle Temperature	204 to 246	°C	
Processing (Melt) Temp	204 to 246	°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.	Type I, 5.0 mm/min
5.	Type I, 5.0 mm/min
6.	1.3 mm/min
7.	2.0 mm/min
8.	1.3 mm/min
9.	80*10*4 sp=62mm
10.	80*10*4
11.	80*10*4
12.	80*10*4 mm
13.	Rate B (120°C/h), Loading 2 (50 N)

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