

CYCOLAC™ MG47U resin

Acrylonitrile Butadiene Styrene

SABIC Innovative Plastics

Message:

Multi-purpose, UV stabilized injection molding ABS providing a favorable balance of engineering properties.

General Information			
Additive	UV Stabilizer		
Features	Good UV Resistance		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.04	g/cm ³	ASTM D792, ISO 1183
Melt Mass-Flow Rate (MFR) (220°C/10.0 kg)	17	g/10 min	ISO 1133
Molding Shrinkage - Flow (3.20 mm)	0.50 to 0.80	%	Internal Method
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale)	112		ASTM D785
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	2500	MPa	ISO 527-2/1
Tensile Stress			ISO 527-2/50
Yield	45.0	MPa	
Break	33.0	MPa	
Tensile Strain			ISO 527-2/50
Yield	2.4	%	
Break	20	%	
Flexural Modulus ¹	2250	MPa	ISO 178
Flexural Stress	68.0	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact Strength ²			ISO 180/1A
-30°C	8.0	kJ/m ²	
23°C	20	kJ/m ²	
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, Unannealed, 3.20 mm	94.0	°C	ASTM D648
1.8 MPa, Unannealed, 3.20 mm	80.0	°C	ASTM D648
1.8 MPa, Unannealed, 64.0 mm Span ³	81.0	°C	ISO 75-2/Af
Vicat Softening Temperature			
--	99.0	°C	ASTM D1525 ⁴
--	98.0	°C	ISO 306/B50
--	100	°C	ISO 306/B120

CLTE		ASTM E831	
Flow : -40 to 40°C	8.8E-5	cm/cm/°C	
Transverse : -40 to 40°C	8.8E-5	cm/cm/°C	
Fill Analysis	Nominal Value	Unit	Test Method
Melt Viscosity (240°C, 1000 sec ⁻¹)	225	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.	2.0 mm/min		
2.	80*10*4		
3.	80*10*4 mm		
4.	Rate B (120°C/h), Loading 2 (50 N)		

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