

CYCOLAC™ G320A resin

Acrylonitrile Butadiene Styrene
SABIC Innovative Plastics Europe

Message:
Low flow, good impact, low heat resistance.

General Information			
Features	Impact resistance, good		
	Low liquidity		
RoHS Compliance	RoHS compliance		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.04	g/cm ³	ASTM D792
Melt Mass-Flow Rate (MFR)			
230°C/3.8 kg	1.2	g/10 min	ASTM D1238
220°C/10.0 kg	8.0	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	1800	MPa	ASTM D638
--	1850	MPa	ISO 527-2/1
Tensile Strength			
Yield ²	39.0	MPa	ASTM D638
Yield	42.0	MPa	ISO 527-2/50
Fracture ³	31.0	MPa	ASTM D638
Fracture	32.0	MPa	ISO 527-2/50
Tensile Elongation			
Yield ⁴	2.4	%	ASTM D638
Yield	2.8	%	ISO 527-2/50
Fracture ⁵	26	%	ASTM D638
Fracture	20	%	ISO 527-2/50
Flexural Modulus			
50.0mm span ⁶	1800	MPa	ASTM D790
-- ⁷	1700	MPa	ISO 178
Flexural Stress			
--	56.0	MPa	ISO 178
Yield, 50.0mm span ⁸	58.0	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact			

23°C	320	J/m	ASTM D256
-30°C ⁹	15	kJ/m ²	ISO 180/1A
23°C ¹⁰	32	kJ/m ²	ISO 180/1A
Instrumented Dart Impact (23°C, Total Energy)	29.0	J	ASTM D3763
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, unannealed, 3.20mm	94.0	°C	ASTM D648
1.8 MPa, unannealed, 3.20mm	79.0	°C	ASTM D648
1.8 MPa, unannealed, 64.0mm span ¹¹	79.0	°C	ISO 75-2/Af
Vicat Softening Temperature			
--	99.0	°C	ASTM D1525 ¹²
--	98.0	°C	ISO 306/B50
Linear thermal expansion coefficient			ASTM E831
Flow: -40 to 40°C	9.5E-5	cm/cm/°C	ASTM E831
Lateral: -40 to 40°C	9.4E-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 ¹³	PLC 5		ASTM D495
Comparative Tracking Index (CTI)	PLC 0		UL 746
High Amp Arc Ignition (HAI)	PLC 1		UL 746
High Voltage Arc Tracking Rate (HVTR)	PLC 0		UL 746
Hot-wire Ignition (HWI)	PLC 3		UL 746
Flammability	Nominal Value		Test Method
Flame Rating (1.5 mm)	HB		UL 94
Fill Analysis	Nominal Value	Unit	Test Method
Melt Viscosity (240°C, 1000 sec ⁻¹)	280	Pa · s	ASTM D3835
Injection	Nominal Value	Unit	
Drying Temperature	88 - 93	°C	
Drying Time	2.0 - 4.0	hr	
Drying Time, Maximum	8.0	hr	
Suggested Max Moisture	0.010	%	
Suggested Shot Size	50 - 70	%	
Rear Temperature	188 - 199	°C	
Middle Temperature	210 - 221	°C	
Front Temperature	227 - 238	°C	
Nozzle Temperature	232 - 274	°C	
Processing (Melt) Temp	232 - 274	°C	
Mold Temperature	49 - 66	°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	
11.	80*10*4 mm	
12.	标准 B (120°C/h), 载荷2 (50N)	
13.	Tungsten electrode	

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