

CYCOLAC™ MG29 resin

Acrylonitrile Butadiene Styrene

SABIC Innovative Plastics

Message:

Super high impact ABS. Good low temperature toughness.

General Information			
UL YellowCard	E45329-102071272		
Features	Ultra-high impact resistance		
	Low Temperature Flexibility		
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	2000	MPa	ASTM D638
--	2050	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	2070	MPa	ASTM D790
-- ⁷	1990	MPa	ISO 178
Flexural Stress			
--	61.0	MPa	ISO 178
Yield, 50.0mm span ⁸	65.0	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method

Notched Izod Impact			
23°C	460	J/m	ASTM D256
-30°C ⁹	12	kJ/m ²	ISO 180/1A
23°C ¹⁰	37	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 (1.50 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	87.8 - 93.3	°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	48.9 - 65.6	°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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