

CYCOLOY™ MC8002 resin

Polycarbonate + ABS

SABIC Innovative Plastics

Message:

PC/ABS, low viscosity, high impact and ductile.

General Information	
Features	Low viscosity Impact resistance, high ductility
Uses	Application in Automobile Field
Processing Method	Injection molding
Multi-Point Data	Coefficient of Thermal Expansion vs. Temperature (ASTM E831) Compressive Stress vs. Strain (ASTM D695) Elastic Modulus vs Temperature (ASTM D4065) Flexural DMA (ASTM D4065) Pressure-Volume-Temperature (PVT - Zoller Method) Shear DMA (ASTM D4065) Specific Heat vs. Temperature (ASTM D3417) Tensile Creep (ASTM D2990) Tensile Fatigue Tensile Stress vs. Strain (ASTM D638) Thermal Conductivity vs. Temperature (ASTM E1530) Viscosity vs. Shear Rate (ASTM D3835)

Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.14	g/cm ³	ASTM D792
Melt Mass-Flow Rate (MFR) (260°C/5.0 kg)	9.0	g/10 min	ASTM D1238
Molding Shrinkage - Flow (3.20 mm)	0.50 - 0.70	%	Internal method
Water Absorption			ASTM D570
24 hr	0.10	%	ASTM D570
Equilibrium, 23°C	0.40	%	ASTM D570
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus ¹	2210	MPa	ASTM D638
Tensile Strength ² (Yield)	56.5	MPa	ASTM D638
Tensile Elongation ³			ASTM D638
Yield	5.0	%	ASTM D638
Fracture	150	%	ASTM D638
Flexural Modulus ⁴ (50.0 mm Span)	2340	MPa	ASTM D790

Flexural Strength ⁵ (Yield, 50.0 mm Span)	86.2	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact			ASTM D256
-30°C	530	J/m	ASTM D256
23°C	640	J/m	ASTM D256
Instrumented Dart Impact			ASTM D3763
-30°C, Total Energy	54.2	J	ASTM D3763
23°C, Total Energy	61.0	J	ASTM D3763
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
0.45 MPa, unannealed, 3.20mm	124	°C	ASTM D648
1.8 MPa, unannealed, 3.20mm	107	°C	ASTM D648
1.8 MPa, unannealed, 6.40mm	110	°C	ASTM D648
CLTE - Flow (-40 to 40°C)	7.2E-5	cm/cm/°C	ASTM E831
Thermal Conductivity	0.20	W/m/K	ASTM C177
Injection	Nominal Value	Unit	
Drying Temperature	104 - 110	°C	
Drying Time	3.0 - 4.0	hr	
Drying Time, Maximum	8.0	hr	
Suggested Max Moisture	0.040	%	
Suggested Shot Size	30 - 80	%	
Rear Temperature	249 - 288	°C	
Middle Temperature	254 - 293	°C	
Front Temperature	260 - 302	°C	
Nozzle Temperature	274 - 302	°C	
Processing (Melt) Temp	274 - 302	°C	
Mold Temperature	60 - 88	°C	
Back Pressure	0.345 - 0.689	MPa	
Screw Speed	40 - 70	rpm	
Vent Depth	0.038 - 0.076	mm	
NOTE			
1.	50 mm/min		
2.	Type 1, 50mm/min		
3.	Type 1, 50mm/min		
4.	1.3 mm/min		
5.	1.3 mm/min		

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