

CYCOLOY™ MC8100 resin

Polycarbonate + ABS

SABIC Innovative Plastics

Message:

PC/ABS, extrusion and blow molding grade.

General Information	
Processing Method	Extrusion blow molding
Multi-Point Data	Coefficient of Thermal Expansion vs. Temperature (ASTM E831)
	Instrumented Impact (Energy) (ASTM D3763)
	Instrumented Impact (Load) (ASTM D3763)
	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	1.13	g/cm ³	ASTM D792
Molding Shrinkage - Flow (3.20 mm)	0.40 - 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	2070	MPa	ASTM D638
Tensile Strength ² (Yield)	52.4	MPa	ASTM D638
Tensile Elongation ³			ASTM D638
Yield	5.0	%	ASTM D638
Fracture	100	%	ASTM D638
Flexural Modulus ⁴ (50.0 mm Span)	2070	MPa	ASTM D790
Flexural Strength ⁵ (Yield, 50.0 mm Span)	77.2	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact			ASTM D256
-30°C	430	J/m	ASTM D256
23°C	530	J/m	ASTM D256
Instrumented Dart Impact			ASTM D3763
-30°C, Total Energy	47.5	J	ASTM D3763
23°C, Total Energy	54.2	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	104	°C	ASTM D648
CLTE - Flow (-40 to 40°C)	8.1E-5	cm/cm/°C	ASTM E831
Thermal Conductivity	0.20	W/m/K	ASTM C177

Extrusion	Nominal Value	Unit
Drying Temperature	99 - 110	°C
Drying Time	3.0 - 4.0	hr
Suggested Max Moisture	0.040 - 0.050	%
Cylinder Zone 1 Temp.	238 - 249	°C
Cylinder Zone 2 Temp.	238 - 254	°C
Cylinder Zone 3 Temp.	238 - 254	°C
Cylinder Zone 4 Temp.	238 - 257	°C
Cylinder Zone 5 Temp.	243 - 260	°C
Adapter Temperature	243 - 260	°C
Die Temperature	249 - 266	°C

Extrusion instructions

Drying Time (Cumulative): 24 hrs
 Extruder Feed Zone Temperature: 60 - 79°C
 Head - Zone 6 - Top Temperature: 243 - 260 °C
 Head - Zone 7 - Bottom Temperature: 243 - 260 °C
 Melt Temperature (Parison): 243 - 260 °C
 Minimum Moisture Content: .04 %
 Mold Temperature: 38 - 88 °C
 Screw Speed: 20 - 50 rpm

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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