

CYCOLOY™ Resin MC8002 - Americas

Polycarbonate + ABS
SABIC

PROSPECTOR®

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Technical Data

Product Description

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

General

Material Status	• Commercial: Active
Search for UL Yellow Card	• SABIC • CYCOLOY™ Resin
Availability	• Latin America • North America
Uses	• Aerospace Applications • Appliances • Automotive Applications • Automotive Exterior Parts • Automotive Interior Parts • Automotive Lighting • Automotive Under the Hood • Electrical/Electronic Applications • Electronic Displays • Lighting Applications
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)
Also Available In	• Asia Pacific

Physical	Nominal Value Unit	Test Method
Density / 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 to 0.70 %	Internal Method
Water Absorption		ASTM D570
24 hr, 23°C	0.10 %	
Saturation, 23°C	0.40 %	

Mechanical	Nominal Value Unit	Test Method
Tensile Modulus ²	2200 MPa	ASTM D638
Tensile Strength ³ (Yield)	56.0 MPa	ASTM D638
Tensile Elongation ³		ASTM D638
Yield	5.0 %	
Break	150 %	
Flexural Modulus ⁴ (50.0 mm Span)	2340 MPa	ASTM D790
Flexural Strength ⁴ (Yield, 50.0 mm Span)	86.0 MPa	ASTM D790

Impact	Nominal Value Unit	Test Method
Notched Izod Impact		ASTM D256
-30°C	530 J/m	
23°C	640 J/m	
Instrumented Dart Impact		ASTM D3763
-30°C, Total Energy	54.0 J	
23°C, Total Energy	61.0 J	



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Thermal	Nominal Value Unit	Test Method
Deflection Temperature Under Load		ASTM D648
0.45 MPa, Unannealed, 3.20 mm	123 °C	
1.8 MPa, Unannealed, 3.20 mm	107 °C	
1.8 MPa, Unannealed, 6.40 mm	110 °C	
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	105 to 110 °C
Drying Time	3.0 to 4.0 hr
Suggested Max Moisture	0.040 %
Suggested Shot Size	30 to 80 %
Rear Temperature	250 to 290 °C
Middle Temperature	255 to 295 °C
Front Temperature	260 to 300 °C
Nozzle Temperature	275 to 300 °C
Processing (Melt) Temp	275 to 300 °C
Mold Temperature	60 to 90 °C
Back Pressure	0.300 to 0.700 MPa
Screw Speed	40 to 70 rpm
Vent Depth	0.038 to 0.076 mm

Injection Notes

Injection Molding Parameters

- Drying Time (Cumulative): 8 hrs

Notes

¹ Typical properties: these are not to be construed as specifications.

² 50 mm/min

³ Type I, 50 mm/min

⁴ 1.3 mm/min



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Where to Buy

Supplier

SABIC

Web: <http://www.sabic.com/>

Distributor

3Polymer (Guangzhou) Chemical Technology Co., Ltd.

Telephone: +86-20-3466-7988

Web: <http://3polymer.com>

Availability: China

Nexeo Plastics

Nexeo Plastics is leading global resin distributor with the technical resources you need to overcome material challenges. Visit us on the web at www.nexeoplastics.com.

Telephone: 833-446-3936

Web: <https://www.nexeoplastics.com/>

Availability: North America

