

CYCOLOY™ MC1300 resin

Polycarbonate + ABS

SABIC Innovative Plastics

Message:

CYCOLOY MC1300 resin is an injection moldable PC/ABS blend with excellent flow and impact performance. It is designed for plating applications mostly used in the automotive industry.

General Information	
UL YellowCard	E121562-101286965
Features	Good Flow
	Good Impact Resistance
	Platable
Uses	Automotive Applications
Processing Method	Injection Molding
Multi-Point Data	Coefficient of Thermal Expansion vs. Temperature (ASTM E831)
	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	1.10	g/cm ³	ASTM D792
Melt Mass-Flow Rate (MFR) (260°C/5.0 kg)	14	g/10 min	ASTM D1238
Molding Shrinkage			Internal Method
Flow : 3.20 mm	0.50 to 0.80	%	
Across Flow : 3.20 mm	0.50 to 0.70	%	
Water Absorption (24 hr)	0.10	%	ASTM D570
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus ¹	2140	MPa	ASTM D638
Tensile Strength ²			ASTM D638
Yield	50.3	MPa	
Break	44.1	MPa	
Tensile Elongation ³			ASTM D638

Yield	8.6	%	
Break	150	%	
Flexural Modulus ⁴ (50.0 mm Span)	2070	MPa	ASTM D790
Flexural Strength ⁵ (Yield, 50.0 mm Span)	72.4	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact			ASTM D256
-30°C	430	J/m	
23°C	530	J/m	
Instrumented Dart Impact			ASTM D3763
-30°C, Total Energy	33.9	J	
23°C, Total Energy	40.7	J	
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
0.45 MPa, Unannealed, 3.20 mm	116	°C	
1.8 MPa, Unannealed, 3.20 mm	98.9	°C	
Vicat Softening Temperature	112	°C	ASTM D1525 ⁶
CLTE			ASTM E831
Flow : -40 to 40°C	7.2E-5	cm/cm/°C	
Transverse : -40 to 40°C	9.0E-5	cm/cm/°C	
Thermal Conductivity	0.20	W/m/K	ASTM C177
Injection	Nominal Value	Unit	
Drying Temperature	98.9 to 104	°C	
Drying Time	3.0 to 4.0	hr	
Drying Time, Maximum	8.0	hr	
Suggested Max Moisture	0.040	%	
Suggested Shot Size	30 to 80	%	
Rear Temperature	249 to 282	°C	
Middle Temperature	254 to 288	°C	
Front Temperature	254 to 288	°C	
Nozzle Temperature	260 to 288	°C	
Processing (Melt) Temp	260 to 288	°C	
Mold Temperature	76.7 to 98.9	°C	
Back Pressure	0.345 to 0.689	MPa	
Screw Speed	40 to 70	rpm	
Vent Depth	0.038 to 0.076	mm	
NOTE			
1.	50 mm/min		
2.	Type I, 50 mm/min		
3.	Type I, 50 mm/min		
4.	1.3 mm/min		
5.	1.3 mm/min		
6.	Rate B (120°C/h), Loading 2 (50 N)		

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