

CYCOLOY™ RESIN MC1300

REGION AMERICAS

DESCRIPTION

PC/ABS, excellent flow and impact performance, plating and painting applications.

TYPICAL PROPERTY VALUES

Revision 20210402

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, yld, Type I, 50 mm/min	50	MPa	ASTM D638
Tensile Stress, brk, Type I, 50 mm/min	44	MPa	ASTM D638
Tensile Strain, yld, Type I, 50 mm/min	8.6	%	ASTM D638
Tensile Strain, brk, Type I, 50 mm/min	150	%	ASTM D638
Tensile Modulus, 50 mm/min	2130	MPa	ASTM D638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	72	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	2100	MPa	ASTM D790
Tensile Modulus, 1 mm/min	2200	MPa	ISO 527
Tensile Stress, yield, 50 mm/min	45	MPa	ISO 527
Flexural Modulus, 2 mm/min	2000	MPa	ISO 178
IMPACT			
Izod Impact, notched, 23°C	534	J/m	ASTM D256
Izod Impact, notched, -30°C	427	J/m	ASTM D256
Izod Impact, notched 80°10'4 +23°C	46	kJ/m ²	ISO 180/1A
Izod Impact, notched 80°10'4 -30°C	41	kJ/m ²	ISO 180/1A
Izod Impact, notched 80°10'4 -40°C	41	kJ/m ²	ISO 180/1A
Instrumented Dart Impact Total Energy, 23°C	41	J	ASTM D3763
Instrumented Dart Impact Total Energy, -30°C	33	J	ASTM D3763
Charpy 23°C, V-notch Edgew 80°10'4 sp=62mm	50	kJ/m ²	ISO 179/1eA
Charpy -30°C, V-notch Edgew 80°10'4 sp=62mm	35	kJ/m ²	ISO 179/1eA
THERMAL			
Vicat Softening Temp, Rate B/50	112	°C	ASTM D1525
HDT, 0.45 MPa, 3.2 mm, unannealed	115	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	99	°C	ASTM D648
CTE, -40°C to 40°C, flow	7.2E-05	1/°C	ASTM E831
CTE, -40°C to 40°C, xflow	9.E-05	1/°C	ASTM E831
Thermal Conductivity	0.2	W/m·°C	ASTM C177
HDT/Af, 1.8 MPa Flatw 80°10'4 sp=64mm	90	°C	ISO 75/Af
HDT/Bf, 0.45 MPa Flatw 80°10'4 sp=64mm	120	°C	ISO 75/Bf
Vicat Softening Temp, Rate B/120	112	°C	ISO 306
PHYSICAL			
Specific Gravity	1.1	-	ASTM D792
Water Absorption, (23°C/24hrs)	0.1	%	ASTM D570
Mold Shrinkage, flow, 3.2 mm	0.5 – 0.8	%	SABIC method
Mold Shrinkage, xflow, 3.2 mm	0.5 – 0.7	%	SABIC method

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Melt Flow Rate, 260°C/5.0 kgf	14	g/10 min	ASTM D1238
Density	1.1	g/cm ³	ISO 1183
Melt Volume Rate, MVR at 265°C/5.0 kg	20	cm ³ /10 min	ISO 1133
Poisson's Ratio	0.35	-	ISO 527-1/2
FLAME CHARACTERISTICS			
UL Yellow Card Link	E121562-101286965	-	-
INJECTION MOLDING			
Drying Temperature	100 – 105	°C	
Drying Time	3 – 4	Hrs	
Drying Time (Cumulative)	8	Hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	260 – 290	°C	
Nozzle Temperature	260 – 290	°C	
Front - Zone 3 Temperature	255 – 290	°C	
Middle - Zone 2 Temperature	255 – 290	°C	
Rear - Zone 1 Temperature	250 – 280	°C	
Mold Temperature	75 – 100	°C	
Back Pressure	0.3 – 0.7	MPa	
Screw Speed	40 – 70	rpm	
Shot to Cylinder Size	30 – 80	%	
Vent Depth	0.038 – 0.076	mm	

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