

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

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
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	

DISCLAIMER

Any sale by SABIC, its subsidiaries and affiliates (each a "seller"), is made exclusively under seller's standard conditions of sale (available upon request) unless agreed otherwise in writing and signed on behalf of the seller. While the information contained herein is given in good faith, SELLER MAKES NO WARRANTY, EXPRESS OR IMPLIED, INCLUDING MERCHANTABILITY AND NONINFRINGEMENT OF INTELLECTUAL PROPERTY, NOR ASSUMES ANY LIABILITY, DIRECT OR INDIRECT, WITH RESPECT TO THE PERFORMANCE, SUITABILITY OR FITNESS FOR INTENDED USE OR PURPOSE OF THESE PRODUCTS IN ANY APPLICATION. Each customer must determine the suitability of seller materials for the customer's particular use through appropriate testing and analysis. No statement by seller concerning a possible use of any product, service or design is intended, or should be construed, to grant any license under any patent or other intellectual property right.