

Cycoloy* Resin MC1300

Asia Pacific: COMMERCIAL

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

TYPICAL PROPERTIES ¹	TYPICAL VALUE	UNIT	STANDARD
MECHANICAL			
Tensile Stress, yld, Type I, 50 mm/min	50	MPa	ASTM D 638
Tensile Stress, brk, Type I, 50 mm/min	44	MPa	ASTM D 638
Tensile Strain, yld, Type I, 50 mm/min	8.6	%	ASTM D 638
Tensile Strain, brk, Type I, 50 mm/min	150	%	ASTM D 638
Tensile Modulus, 50 mm/min	2130	MPa	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	72	MPa	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	2060	MPa	ASTM D 790
IMPACT			
Izod Impact, notched, 23°C	534	J/m	ASTM D 256
Izod Impact, notched, -30°C	427	J/m	ASTM D 256
Instrumented Impact Total Energy, 23°C	40	J	ASTM D 3763
Instrumented Impact Total Energy, -30°C	33	J	ASTM D 3763
THERMAL			
Vicat Softening Temp, Rate B/50	111	°C	ASTM D 1525
HDT, 0.45 MPa, 3.2 mm, unannealed	115	°C	ASTM D 648
HDT, 1.82 MPa, 3.2mm, unannealed	98	°C	ASTM D 648
CTE, -40°C to 40°C, flow	7.2E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, xflow	9.E-05	1/°C	ASTM E 831
Thermal Conductivity	0.2	W/m-°C	ASTM C 177
PHYSICAL			
Specific Gravity	1.1	-	ASTM D 792
Water Absorption, 24 hours	0.1	%	ASTM D 570
Mold Shrinkage, flow, 3.2 mm (5)	0.5 - 0.8	%	SABIC Method
Mold Shrinkage, xflow, 3.2 mm (5)	0.5 - 0.7	%	SABIC Method
Melt Flow Rate, 260°C/5.0 kgf	14	g/10 min	ASTM D 1238

1) Typical values only. Variations within normal tolerances are possible for various colours. All values are measured at least after 48 hours storage at 23°C/50% relative humidity. All properties, except the melt volume rate are measured on injection moulded samples. All samples are prepared according to ISO 294.

2) Only typical data for material selection purpose. Not to be used for part or tool design.
3) This rating is not intended to reflect hazards presented by this or any other material under actual fire conditions.
4) Own measurement according to UL.
5) Measurements made from laboratory test coupon. Actual shrinkage may vary outside of range due to differences in processing conditions, equipment, part geometry and tool design. It is recommended that mold shrinkage studies be performed with surrogate or legacy tooling prior to cutting tools for new molded article.

Source, GMD, Last Update:

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PROCESSING PARAMETERS	TYPICAL VALUE	UNIT
Injection Molding		
Drying Temperature	100 - 105	°C
Drying Time	3 - 4	hrs
Drying Time (Cumulative)	8	hrs
Maximum Moisture Content	0.04	%
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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