

Cycloloy* Resin MC1300

Americas: COMMERCIAL

Cycloloy 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.

Property

| TYPICAL PROPERTIES ⁽¹⁾ | | | |
|--|-----------|----------|--------------|
| MECHANICAL | Value | Unit | Standard |
| 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 | Value | Unit | Standard |
| 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 | Value | Unit | Standard |
| 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 | Value | Unit | Standard |
| Specific Gravity | 1.1 | - | ASTM D 792 |
| Water Absorption, 24 hours | 0.1 | % | ASTM D 570 |
| Mold Shrinkage, flow, 3.2 mm | 0.5 - 0.8 | % | SABIC Method |
| Mold Shrinkage, xflow, 3.2 mm | 0.5 - 0.7 | % | SABIC Method |
| Melt Flow Rate, 260°C/5.0 kgf | 14 | g/10 min | ASTM D 1238 |

Source GMD, last updated:10/05/1998

Processing

| Parameter | 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 |

Source GMD, last updated:10/05/1998

THESE PROPERTY VALUES ARE NOT INTENDED FOR SPECIFICATION PURPOSES.

PLEASE CHECK WITH YOUR [\(LOCAL SALES OFFICE\)](#) FOR AVAILABILITY IN YOUR REGION

(1) Typical values only. Variations within normal tolerances are possible for various colors. All values are measured after at least 48 hours storage at 23°C/50% relative humidity. All properties, except the melt volume and melt flow rates, are measured on injection molded samples. All samples tested under ISO test standards are prepared according to ISO 294.

(2) Only typical data for selection purposes. 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) Internal measurements according to UL standards.

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