

CYCOLACT™ RESIN MG29

REGION ASIA

DESCRIPTION

Super high impact ABS. Good low temperature toughness.

TYPICAL PROPERTY VALUES

Revision 20220721

| PROPERTIES | TYPICAL VALUES | UNITS | TEST METHODS |
|--|----------------|-------------------|--------------|
| MECHANICAL | | | |
| Tensile Stress, yld, Type I, 5 mm/min | 39 | MPa | ASTM D638 |
| Tensile Stress, brk, Type I, 5 mm/min | 31 | MPa | ASTM D638 |
| Tensile Strain, yld, Type I, 5 mm/min | 2.4 | % | ASTM D638 |
| Tensile Strain, brk, Type I, 5 mm/min | 26 | % | ASTM D638 |
| Tensile Modulus, 5 mm/min | 2000 | MPa | ASTM D638 |
| Flexural Stress, yld, 1.3 mm/min, 50 mm span | 65 | MPa | ASTM D790 |
| Flexural Modulus, 1.3 mm/min, 50 mm span | 2070 | MPa | ASTM D790 |
| Tensile Stress, yield, 50 mm/min | 42 | MPa | ISO 527 |
| Tensile Stress, break, 50 mm/min | 32 | MPa | ISO 527 |
| Tensile Strain, yield, 50 mm/min | 2.8 | % | ISO 527 |
| Tensile Strain, break, 50 mm/min | 20 | % | ISO 527 |
| Tensile Modulus, 1 mm/min | 2050 | MPa | ISO 527 |
| Flexural Stress, yield, 2 mm/min | 61 | MPa | ISO 178 |
| Flexural Modulus, 2 mm/min | 1990 | MPa | ISO 178 |
| IMPACT | | | |
| Izod Impact, notched, 23°C | 455 | J/m | ASTM D256 |
| Instrumented Dart Impact Total Energy, 23°C | 29 | J | ASTM D3763 |
| Izod Impact, notched 80°10*4 +23°C | 37 | kJ/m ² | ISO 180/1A |
| Izod Impact, notched 80°10*4 -30°C | 12 | kJ/m ² | ISO 180/1A |
| THERMAL | | | |
| Vicat Softening Temp, Rate B/50 | 99 | °C | ASTM D1525 |
| HDT, 0.45 MPa, 3.2 mm, unannealed | 94 | °C | ASTM D648 |
| HDT, 1.82 MPa, 3.2mm, unannealed | 79 | °C | ASTM D648 |
| CTE, -40°C to 40°C, flow | 9.54E-05 | 1/°C | ASTM E831 |
| CTE, -40°C to 40°C, xflow | 9.36E-05 | 1/°C | ASTM E831 |
| Vicat Softening Temp, Rate B/50 | 98 | °C | ISO 306 |
| HDT/Af, 1.8 MPa Flatw 80°10*4 sp=64mm | 79 | °C | ISO 75/Af |
| Relative Temp Index, Elec | 60 | °C | UL 746B |
| Relative Temp Index, Mech w/impact | 60 | °C | UL 746B |
| Relative Temp Index, Mech w/o impact | 60 | °C | UL 746B |
| PHYSICAL | | | |
| Specific Gravity | 1.04 | - | ASTM D792 |
| Mold Shrinkage, flow, 3.2 mm | 0.5 – 0.8 | % | SABIC method |
| Melt Flow Rate, 230°C/3.8 kg | 1.2 | g/10 min | ASTM D1238 |
| Melt Viscosity, 240°C, 1000 sec-1 | 2800 | Poise | ASTM D3825 |

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|--|----------------|----------|--------------|
| Melt Flow Rate, 220°C/10.0 kg | 8 | g/10 min | ISO 1133 |
| ELECTRICAL | | | |
| Arc Resistance, Tungsten {PLC} | 5 | PLC Code | ASTM D495 |
| Hot Wire Ignition {PLC} | 3 | PLC Code | UL 746A |
| High Voltage Arc Track Rate {PLC} | 0 | PLC Code | UL 746A |
| High Ampere Arc Ign, surface {PLC} | 1 | PLC Code | UL 746A |
| Comparative Tracking Index (UL) {PLC} | 0 | PLC Code | UL 746A |
| FLAME CHARACTERISTICS | | | |
| UL Recognized, 94HB Flame Class Rating | 1.5 | mm | UL 94 |
| INJECTION MOLDING | | | |
| Drying Temperature | 90 – 95 | °C | |
| Drying Time | 2 – 4 | Hrs | |
| Drying Time (Cumulative) | 8 | Hrs | |
| Maximum Moisture Content | 0.1 | % | |
| Melt Temperature | 230 – 275 | °C | |
| Nozzle Temperature | 230 – 275 | °C | |
| Front - Zone 3 Temperature | 225 – 240 | °C | |
| Middle - Zone 2 Temperature | 210 – 220 | °C | |
| Rear - Zone 1 Temperature | 190 – 200 | °C | |
| Mold Temperature | 50 – 65 | °C | |
| Back Pressure | 0.3 – 0.7 | MPa | |
| Screw Speed | 30 – 60 | rpm | |
| Shot to Cylinder Size | 50 – 70 | % | |
| Vent Depth | 0.038 – 0.051 | mm | |

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