# CYCOLAC™ RESIN MGABS01

REGION ASIA

## DESCRIPTION

Injection molding ABS. High impact, high gloss, good flow.

## TYPICAL PROPERTY VALUES

Revision 20190814

| PROPERTIES | TYPICAL VALUES | UNITS | TEST METHODS |
|---|---|---|---|
| MECHANICAL | | | |
| Tensile Stress, yld, Type I, 5 mm/min | 41 | MPa | ASTM D 638 |
| Tensile Stress, brk, Type I, 5 mm/min | 31 | MPa | ASTM D 638 |
| Tensile Strain, yld, Type I, 5 mm/min | 2.1 | % | ASTM D 638 |
| Tensile Strain, brk, Type I, 5 mm/min | 20 | % | ASTM D 638 |
| Tensile Modulus, 5 mm/min | 2100 | MPa | ASTM D 638 |
| Flexural Stress, yld, 1.3 mm/min, 50 mm span | 68 | MPa | ASTM D 790 |
| Flexural Modulus, 1.3 mm/min, 50 mm span | 2200 | MPa | ASTM D 790 |
| IMPACT | | | |
| Izod Impact, notched, 23°C | 293 | J/m | ASTM D 256 |
| Instrumented Impact Total Energy, 23°C | 31 | J | ASTM D 3763 |
| THERMAL | | | |
| Vicat Softening Temp, Rate B/50 | 98 | °C | ASTM D 1525 |
| HDT, 0.45 MPa, 3.2 mm, unannealed | 97 | °C | ASTM D 648 |
| HDT, 1.82 MPa, 3.2mm, unannealed | 82 | °C | ASTM D 648 |
| CTE, -40°C to 40°C, flow | 8.64E-05 | 1/°C | ASTM E 831 |
| CTE, -40°C to 40°C, xflow | 8.82E-05 | 1/°C | ASTM E 831 |
| 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 D 792 |
| Mold Shrinkage, flow, 3.2 mm | 0.5 – 0.8 | % | SABIC method |
| Melt Flow Rate, 230°C/3.8 kg | 5.6 | g/10 min | ASTM D 1238 |
| Melt Viscosity, 240°C, 1000 sec-1 | 2400 | Poise | ASTM D 3825 |
| Melt Volume Rate, MVR at 220°C/10.0 kg | 18 | cm³/10 min | ISO 1133 |
| ELECTRICAL | | | |
| Arc Resistance, Tungsten {PLC} | 6 | PLC Code | ASTM D 495 |
| Hot Wire Ignition {PLC} | 3 | PLC Code | UL 746A |
| High Voltage Arc Track Rate {PLC} | 3 | PLC Code | UL 746A |
| High Ampere Arc Ign, surface {PLC} | 0 | PLC Code | UL 746A |
| Comparative Tracking Index (UL) {PLC} | 0 | PLC Code | UL 746A |
| FLAME CHARACTERISTICS | | | |
| UL Recognized, 94HB Flame Class Rating | 1.52 | mm | UL 94 |
| INJECTION MOLDING | | | |

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|---|---|---|---|
| Drying Temperature | 80 – 95 | °C | |
| Drying Time | 2 – 4 | hrs | |
| Drying Time (Cumulative) | 8 | hrs | |
| Maximum Moisture Content | 0.1 | % | |
| Melt Temperature | 220 – 260 | °C | |
| Nozzle Temperature | 220 – 260 | °C | |
| Front - Zone 3 Temperature | 215 – 240 | °C | |
| Middle - Zone 2 Temperature | 205 – 225 | °C | |
| Rear - Zone 1 Temperature | 190 – 210 | °C | |
| Mold Temperature | 50 – 70 | °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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