



## Cyclocac\* Resin GDM3500

### Americas: COMMERCIAL

General purpose, injection molding, low gloss with medium impact.

| TYPICAL PROPERTIES <sup>1</sup>              | TYPICAL VALUE | UNIT                | STANDARD    |
|----------------------------------------------|---------------|---------------------|-------------|
| <b>MECHANICAL</b>                            |               |                     |             |
| Tensile Stress, yld, Type I, 5 mm/min        | 500           | kgf/cm <sup>2</sup> | ASTM D 638  |
| Tensile Strain, brk, Type I, 5 mm/min        | 20            | %                   | ASTM D 638  |
| Tensile Modulus, 5 mm/min                    | 23900         | kgf/cm <sup>2</sup> | ASTM D 638  |
| Flexural Stress, yld, 1.3 mm/min, 50 mm span | 840           | kgf/cm <sup>2</sup> | ASTM D 790  |
| Flexural Modulus, 1.3 mm/min, 50 mm span     | 25300         | kgf/cm <sup>2</sup> | ASTM D 790  |
| <b>IMPACT</b>                                |               |                     |             |
| Izod Impact, notched, 23°C                   | 32            | cm-kgf/cm           | ASTM D 256  |
| Izod Impact, notched, -40°C                  | 5             | cm-kgf/cm           | ASTM D 256  |
| <b>THERMAL</b>                               |               |                     |             |
| HDT, 0.45 MPa, 3.2 mm, unannealed            | 96            | °C                  | ASTM D 648  |
| HDT, 0.45 MPa, 6.4 mm, unannealed            | 98            | °C                  | ASTM D 648  |
| 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     |
| <b>PHYSICAL</b>                              |               |                     |             |
| Specific Gravity                             | 1.05          | -                   | ASTM D 792  |
| Mold Shrinkage, flow, 3.2 mm                 | 0.4 - 0.6     | %                   | GE Method   |
| Melt Viscosity, 260°C, 1000 sec-1            | 2200          | poise               | ASTM D 3825 |
| <b>OPTICAL</b>                               |               |                     |             |
| Gloss, untextured, 60 degrees                | 30            | -                   | ASTM D 523  |
| <b>ELECTRICAL</b>                            |               |                     |             |
| 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}            | 0             | PLC Code            | UL 746A     |
| High Ampere Arc Ign, surface {PLC}           | 0             | PLC Code            | UL 746A     |
| Comparative Tracking Index (UL) {PLC}        | 1             | PLC Code            | UL 746A     |
| <b>FLAME CHARACTERISTICS</b>                 |               |                     |             |
| UL Recognized, 94HB Flame Class Rating (3)   | 1.47          | mm                  | UL 94       |



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| PROCESSING PARAMETERS       | TYPICAL VALUE | UNIT |
|-----------------------------|---------------|------|
| <b>Injection Molding</b>    |               |      |
| Drying Temperature          | 80 - 90       | °C   |
| Drying Time                 | 2 - 4         | hrs  |
| Drying Time (Cumulative)    | 8             | hrs  |
| Maximum Moisture Content    | 0.01          | %    |
| Melt Temperature            | 230 - 275     | °C   |
| Nozzle Temperature          | 230 - 275     | °C   |
| Front - Zone 3 Temperature  | 230 - 245     | °C   |
| Middle - Zone 2 Temperature | 215 - 225     | °C   |
| Rear - Zone 1 Temperature   | 200 - 210     | °C   |
| Mold Temperature            | 25 - 60       | °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   |