

**Xenoy\* Resin 6123M**  
**Americas: COMMERCIAL**

| TYPICAL PROPERTIES <sup>1</sup>              | TYPICAL VALUE | UNIT   | STANDARD     |
|----------------------------------------------|---------------|--------|--------------|
| <b>MECHANICAL</b>                            |               |        |              |
| Tensile Stress, yld, Type I, 50 mm/min       | 46            | MPa    | ASTM D 638   |
| Tensile Strain, brk, Type I, 50 mm/min       | 130           | %      | ASTM D 638   |
| Flexural Stress, yld, 1.3 mm/min, 50 mm span | 75            | MPa    | ASTM D 790   |
| Flexural Modulus, 1.3 mm/min, 50 mm span     | 1990          | MPa    | ASTM D 790   |
| Hardness, Rockwell R                         | 116           | -      | ASTM D 785   |
| <b>IMPACT</b>                                |               |        |              |
| Izod Impact, unnotched, 23°C                 | 1602          | J/m    | ASTM D 4812  |
| Izod Impact, notched, 23°C                   | 801           | J/m    | ASTM D 256   |
| Modified Gardner, 23°C                       | 54            | J      | ASTM D 3029  |
| <b>THERMAL</b>                               |               |        |              |
| HDT, 0.45 MPa, 6.4 mm, unannealed            | 115           | °C     | ASTM D 648   |
| HDT, 1.82 MPa, 6.4 mm, unannealed            | 86            | °C     | ASTM D 648   |
| CTE, -40°C to 40°C, flow                     | 9.E-05        | 1/°C   | ASTM E 831   |
| CTE, 60°C to 138°C, flow                     | 1.44E-04      | 1/°C   | ASTM E 831   |
| Relative Temp Index, Elec                    | 120           | °C     | UL 746B      |
| Relative Temp Index, Mech w/impact           | 115           | °C     | UL 746B      |
| Relative Temp Index, Mech w/o impact         | 125           | °C     | UL 746B      |
| <b>PHYSICAL</b>                              |               |        |              |
| Specific Gravity                             | 1.24          | -      | ASTM D 792   |
| Specific Volume                              | 0.8           | cm³/g  | ASTM D 792   |
| Water Absorption, 24 hours                   | 0.11          | %      | ASTM D 570   |
| Mold Shrinkage, flow, 3.2 mm                 | 1.2 - 1.5     | %      | SABIC Method |
| Mold Shrinkage, xflow, 3.2 mm                | 1.2 - 1.5     | %      | SABIC Method |
| <b>ELECTRICAL</b>                            |               |        |              |
| Volume Resistivity                           | 1.E+16        | Ohm-cm | ASTM D 257   |



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|--------------------------------------------|---------------|----------|------------|
| <b>ELECTRICAL</b>                          |               |          |            |
| Dielectric Strength, in air, 3.2 mm        | 17.5          | kV/mm    | ASTM D 149 |
| Dielectric Strength, in oil, 1.6 mm        | 22.6          | kV/mm    | ASTM D 149 |
| Relative Permittivity, 100 Hz              | 3.1           | -        | ASTM D 150 |
| Relative Permittivity, 1 MHz               | 3.1           | -        | ASTM D 150 |
| Dissipation Factor, 100 Hz                 | 0.002         | -        | ASTM D 150 |
| Dissipation Factor, 1 MHz                  | 0.02          | -        | ASTM D 150 |
| Arc Resistance, Tungsten {PLC}             | 5             | PLC Code | ASTM D 495 |
| Hot Wire Ignition {PLC}                    | 2             | PLC Code | UL 746A    |
| High Voltage Arc Track Rate {PLC}          | 2             | PLC Code | UL 746A    |
| High Ampere Arc Ign, surface {PLC}         | 1             | PLC Code | UL 746A    |
| Comparative Tracking Index (UL) {PLC}      | 2             | 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          | 110           | °C   |
| Drying Time                 | 4 - 6         | hrs  |
| Drying Time (Cumulative)    | 8             | hrs  |
| Maximum Moisture Content    | 0.02          | %    |
| Melt Temperature            | 260 - 275     | °C   |
| Nozzle Temperature          | 255 - 270     | °C   |
| Front - Zone 3 Temperature  | 255 - 275     | °C   |
| Middle - Zone 2 Temperature | 250 - 270     | °C   |
| Rear - Zone 1 Temperature   | 245 - 265     | °C   |
| Mold Temperature            | 65 - 90       | °C   |
| Back Pressure               | 0.3 - 0.7     | MPa  |
| Screw Speed                 | 50 - 80       | rpm  |
| Shot to Cylinder Size       | 50 - 80       | %    |
| Vent Depth                  | 0.013 - 0.02  | mm   |

