



# LubriOne™ GF-1010 40 MS 2 HS Black 37

## Polyamide 6

### Key Characteristics

#### Product Description

LubriOne™ Lubricated and Wear-Resistant Compounds have been specifically formulated to be self-lubricating materials, offering low coefficient of friction and improved wear resistance properties. LubriOne compounds have been demonstrated to reduce friction, noise, vibration, heat buildup and improve product durability.

#### General

|                       |   |   |   |
|-----------------------|---|---|---|
| Material Status       | • Commercial: Active  |   |   |
| Regional Availability | • Africa & Middle East<br>• Asia Pacific  | • Europe<br>• Latin America   | • North America                           |
| Features              | • Heat Stabilized<br>• High Stiffness   | • Nucleated<br>• Wear Resistant   |   |
| Uses                  | • Appliance Components<br>• Automotive Applications<br>• Bearings<br>• Business Equipment | • Consumer Applications<br>• Conveyor Parts<br>• Gears<br>• Industrial Applications | • Printer Parts<br>• Pulleys<br>• Rollers |
| RoHS Compliance       | • RoHS Compliant  |   |   |
| Appearance            | • Black   |   |   |
| Forms                 | • Pellets   |   |   |
| Processing Method     | • Injection Molding   |   |   |

### Technical Properties <sup>1</sup>

| Physical   | Typical Value (English) | Typical Value (SI) | Test Method |
|--|-------------------------|--------------------|-------------|
| Specific Gravity   | 1.41                    | 1.41               | ASTM D792   |
| Molding Shrinkage - Flow   | 0.010 to 0.020 in/in    | 1.0 to 2.0 %       | ASTM D955   |
| Water Absorption (24 hr)   | 0.70 %                  | 0.70 %             | ASTM D570   |
| Mechanical   | Typical Value (English) | Typical Value (SI) | Test Method |
| Tensile Modulus  | 1.33E+6 psi             | 9170 MPa           | ASTM D638   |
| Tensile Strength (Yield)   | 17700 psi               | 122 MPa            | ASTM D638   |
| Tensile Strength <sup>2</sup> (Break)                              | 17700 psi               | 122 MPa            | ASTM D638   |
| Tensile Elongation <sup>2</sup> (Break)                            | 4.5 %                   | 4.5 %              | ASTM D638   |
| Flexural Modulus   | 1.30E+6 psi             | 8960 MPa           | ASTM D790   |
| Flexural Strength  | 28000 psi               | 193 MPa            | ASTM D790   |
| Coefficient of Friction  |                         |                    | ASTM D1894  |
| vs. Steel - Dynamic  | 0.21                    | 0.21               |             |
| vs. Steel - Static   | 0.31                    | 0.31               |             |
| Impact   | Typical Value (English) | Typical Value (SI) | Test Method |
| Notched Izod Impact  |                         |                    | ASTM D256A  |
| 73°F (23°C), 0.250 in (6.35 mm),<br>Injection Molded               | 3.0 ft-lb/in            | 160 J/m            |             |
| Thermal  | Typical Value (English) | Typical Value (SI) | Test Method |
| Deflection Temperature Under Load<br>66 psi (0.45 MPa), Unannealed | 405 °F                  | 207 °C             | ASTM D648   |
| Deflection Temperature Under Load<br>264 psi (1.8 MPa), Unannealed | 365 °F                  | 185 °C             | ASTM D648   |

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## Processing Information

| Injection              | Typical Value (English) | Typical Value (SI) |
|------------------------|-------------------------|--------------------|
| Drying Temperature     | 160 to 170 °F           | 71.1 to 76.7 °C    |
| Drying Time            | 2.0 to 4.0 hr           | 2.0 to 4.0 hr      |
| Processing (Melt) Temp | 480 to 530 °F           | 249 to 277 °C      |
| Mold Temperature       | 180 to 200 °F           | 82.2 to 93.3 °C    |

## Notes

<sup>1</sup> Typical values are not to be construed as specifications.

<sup>2</sup> Type I, 0.20 in/min (5.1 mm/min)

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