

## Technical Data Sheet

### *Polyaxis* LP 8000-31G BLACK



Polyethylene, High Density, Metallocene

#### Product Description

*Polyaxis* LP-8000 is a high density polyethylene intended for the rotational molding industry. This stiff yet tough compound has been used in watercraft with good success.

|                   |                            |
|-------------------|----------------------------|
| Processing Method | Rotomolding                |
| Forms             | Pellets; Powder            |
| Appearance        | Colors Available           |
| Additive          | Long Term UV-10 Stabilizer |

| Typical Properties                                                                   | Nominal Value | Units             | Test Method |
|--------------------------------------------------------------------------------------|---------------|-------------------|-------------|
| <b>Physical</b>                                                                      |               |                   |             |
| Melt Flow Rate, (190 °C/2.16 kg)                                                     | 3.6           | g/10 min          | ASTM D1238  |
| Density - Specific Gravity                                                           | 0.945         | g/cm <sup>3</sup> | ASTM D792   |
| <b>Mechanical</b>                                                                    |               |                   |             |
| Tensile Strength at Yield, (51 mm/min, Rotational Molded)                            | 22.1          | MPa               | ASTM D638   |
| Environmental Stress Crack Resistance, (Compression Molded, F50, 10% Igepal)         | 6.00          | hr                | ASTM D1693  |
| Flexural Modulus, (Rotational Molded, 1% Secant)                                     | 1000          | MPa               | ASTM D790   |
| Tensile Elongation at Break, (51 mm/min, Rotational Molded)                          | 500           | %                 | ASTM D638   |
| <b>Impact</b>                                                                        |               |                   |             |
| Impact Strength                                                                      |               |                   |             |
| (-40 °C, 3.18 mm, Rotational Molded)                                                 | 88            | J                 | ARM         |
| (-40 °C, 6.35 mm, Rotational Molded)                                                 | >258          | J                 | ARM         |
| <b>Thermal</b>                                                                       |               |                   |             |
| Deflection Temperature Under Load Unannealed (264 psi), (3.18 mm, Rotational Molded) | 39.3          | °C                | ASTM D648   |
| Deflection Temperature Under Load Unannealed (66 psi), (3.18 mm, Rotational Molded)  | 71.1          | °C                | ASTM D648   |