

## Technical Data Sheet

### *Polyaxis* LP 8100-31G BLACK



Polyethylene, High Density, Metallocene

#### Product Description

*Polyaxis* LP-8100 is a high density polyethylene intended for the rotational molding industry. This stiff yet tough compound was designed for watercraft products.

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

| Typical Properties   | Nominal Value | Units             | Test Method |
|--|---------------|-------------------|-------------|
| <b>Physical</b>  |               |                   |             |
| Melt Flow Rate, (190 °C/2.16 kg)   | 5.8           | g/10 min          | ASTM D1238  |
| Density - Specific Gravity   | 0.947         | g/cm <sup>3</sup> | ASTM D792   |
| <b>Mechanical</b>  |               |                   |             |
| Tensile Strength at Yield, (51 mm/min, Rotational Molded)                            | 22.4          | MPa               | ASTM D638   |
| Environmental Stress Crack Resistance, (Compression Molded, F50, 10% Igepal)         | 6.00          | hr                | ASTM D1693  |
| Flexural Modulus, (Rotational Molded, 1% Secant)                                     | 993           | MPa               | ASTM D790   |
| Tensile Elongation at Break, (51 mm/min, Rotational Molded)                          | 200           | %                 | ASTM D638   |
| <b>Impact</b>  |               |                   |             |
| Impact Strength  |               |                   |             |
| (-40 °C, 3.18 mm, Rotational Molded)   | 81            | 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) | 40.6          | °C                | ASTM D648   |
| Deflection Temperature Under Load Unannealed (66 psi), (3.18 mm, Rotational Molded)  | 70.0          | °C                | ASTM D648   |