

## Technical Data Sheet



# Polyaxis LP 8000

Metallocene High Density Polyethylene

LyondellBasell Industries

Rotomolding

## 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.

## General

|                   |                              |
|-------------------|------------------------------|
| Additive          | • Long Term UV-10 Stabilizer |
| Appearance        | • Colors Available           |
| Forms             | • Pellets • Powder           |
| Processing Method | • Rotational Molding         |

| Physical                                        | Nominal Value (English) | Nominal Value (SI)      | Test Method |
|-------------------------------------------------|-------------------------|-------------------------|-------------|
| Density / Specific Gravity <sup>1</sup>         | 0.947                   | 0.945 g/cm <sup>3</sup> | ASTM D792   |
| Melt Mass-Flow Rate (MFR) (190°C/2.16 Kg)       | 3.6 g/10 min            | 3.6 g/10 min            | ASTM D1238  |
| Environmental Stress-Cracking Resistance (ESCR) |                         |                         | ASTM D1693  |

|                                     |         |         |  |
|-------------------------------------|---------|---------|--|
| 10% Igepal, Compression Molded, F50 | 6.00 hr | 6.00 hr |  |
|-------------------------------------|---------|---------|--|

| Mechanical                                               | Nominal Value (English) | Nominal Value (SI) | Test Method |
|----------------------------------------------------------|-------------------------|--------------------|-------------|
| Tensile Strength <sup>2</sup> (Yield, Rotational Molded) | 3200 psi                | 22.1 MPa           | ASTM D638   |
| Tensile Elongation <sup>2</sup>                          |                         |                    | ASTM D638   |
| Break, Rotational Molded                                 | 500 %                   | 500 %              |             |
| Flexural Modulus - 1% Secant (Rotational Molded)         | 145000 psi              | 1000 MPa           | ASTM D790   |

| Impact                                                            | Nominal Value (English) | Nominal Value (SI) | Test Method |
|-------------------------------------------------------------------|-------------------------|--------------------|-------------|
| Impact Strength                                                   |                         |                    | ARM         |
| -40°F (-40°C), 0.125 In (3.18 Mm), Rotational Molded              | 65 ft·lb                | 88 J               |             |
| -40°F (-40°C), 0.250 In (6.35 Mm), Rotational Molded <sup>3</sup> | > 190 ft·lb             | > 258 J            |             |

| Thermal                                                              | Nominal Value (English) | Nominal Value (SI) | Test Method |
|----------------------------------------------------------------------|-------------------------|--------------------|-------------|
| Deflection Temperature Under Load                                    |                         |                    | ASTM D648   |
| 66 Psi (0.45 Mpa), Unannealed, 0.125 In (3.18 Mm), Rotational Molded | 160 °F                  | 71.1 °C            |             |
| 264 Psi (1.8 Mpa), Unannealed, 0.125 In (3.18 Mm), Rotational Molded | 103 °F                  | 39.3 °C            |             |

## Notes

<sup>1</sup> Compression Molded

<sup>2</sup> 2.0 in/min (51 mm/min)

<sup>3</sup> Dart Weight 20 lbs

## Notes

These are typical property values not to be construed as specification limits.