

Technical Data Sheet



Polyaxis LP 8100

Metallocene High Density Polyethylene
LyondellBasell Industries
Rotomolding

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.

General

Material Status	• Commercial: Active
Availability	• North America
Additive	• UV Stabilizer
Appearance	• Colors Available
Forms	• Pellets • Powder
Processing Method	• Rotational Molding

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density / Specific Gravity ¹	0.949	0.947 g/cm ³	ASTM D792
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	5.8 g/10 min	5.8 g/10 min	ASTM D1238
Environmental Stress-Cracking Resistance (ESCR) 10% Igepal, Compression Molded, F50	6.00 hr	6.00 hr	ASTM D1693
Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Strength ² (Yield, Rotational Molded)	3250 psi	22.4 MPa	ASTM D638
Tensile Elongation ² Break, Rotational Molded	200 %	200 %	ASTM D638
Flexural Modulus - 1% Secant (Rotational Molded)	144000 psi	993 MPa	ASTM D790
Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Impact Strength -40°F (-40°C), 0.125 in (3.18 mm), Rotational Molded	60 ft·lb	81 J	ARM
-40°F (-40°C), 0.250 in (6.35 mm), Rotational Molded ³	> 190 ft·lb	> 258 J	
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Deflection Temperature Under Load 66 psi (0.45 MPa), Unannealed, 0.125 in (3.18 mm), Rotational Molded	158 °F	70.0 °C	ASTM D648
264 psi (1.8 MPa), Unannealed, 0.125 in (3.18 mm), Rotational Molded	105 °F	40.6 °C	

Notes

¹ Compression Molded

² 2.0 in/min (51 mm/min)

³ Dart Weight 20 lbs

Notes

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

Processing Techniques

Specific recommendations for resin type and processing conditions can only be made when the end use, required properties and fabrication equipment are known.

Product Storage and Handling

- Product should be stored in dry conditions at temperatures below 50°C and protected from UV-light
- Improper storage may bring damage to the packaging and can negatively affects on the quality of this product
- Keep material completely dry for good processing

Company Information

For further information regarding the LyondellBasell company, please visit <http://www.lyb.com/>.

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