

Technical Data Sheet

**Polyaxis LL 3940**

Linear Low Density Polyethylene
LyondellBasell Industries
Rotomolding

Product Description

PolyAxis LL 3940 is a linear low density polyethylene intended for the rotational molding industry. Offers excellent ESCR and toughness.

General

Material Status	• Commercial: Active
Availability	• North America
Features	• Good ESCR (Stress Crack Resist.) • Good Toughness • Hexene Comonomer • UV Resistant
Uses	• Agricultural Tanks • Outdoor Applications • Pallets • Septic Tanks
Appearance	• Colors Available
Forms	• Powder
Processing Method	• Rotational Molding

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density / Specific Gravity	0.938	0.936 g/cm ³	ASTM D1505
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	3.3 g/10 min	3.3 g/10 min	ASTM D1238
Environmental Stress-Cracking Resistance (ESCR)			ASTM D1693
10% Igepal, Compression Molded, F50	60.0 hr	60.0 hr	
100% Igepal, Compression Molded, F50	> 1000 hr	> 1000 hr	
Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Strength ¹ (Yield, Rotational Molded)	2500 psi	17.2 MPa	ASTM D638
Tensile Elongation ² (Yield)	10 %	10 %	ASTM D638
Flexural Modulus - 1% Secant (Rotational Molded)	93000 psi	641 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	64 ft·lb	87 J	
-40°F (-40°C), 0.250 in (6.35 mm), Rotational Molded	> 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	129 °F	53.9 °C	
264 psi (1.8 MPa), Unannealed	100 °F	37.8 °C	
Peak Melting Temperature	259 °F	126 °C	ASTM D3418

Notes

¹ 2.0 in/min (50 mm/min)

² 2.0 in/min (51 mm/min)

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

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