

Technical Data Sheet



Polyaxis CP 813-31

Linear Low Density Polyethylene
LyondellBasell Industries
Rotomolding

Product Description

Polyaxis CP 813-31 is a black general purpose linear low density polyethylene compound offering quick cycles and part to part consistency. Available as pellet or powder.

General

Material Status	• Commercial: Active	
Availability	• North America	
Additive	• Long Term UV-8 Stabilizer: Yes	
Features	• Fast Molding Cycle	
Uses	• General Purpose	• Outdoor Applications
Appearance	• Black	
Forms	• Pellets	• Powder
Processing Method	• Rotational Molding	

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density ¹	0.932 to 0.939 g/cm ³	0.932 to 0.939 g/cm ³	ASTM D1505
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	4.5 to 6.5 g/10 min	4.5 to 6.5 g/10 min	ASTM D1238
Environmental Stress-Cracking Resistance (ESCR)			ASTM D1693
10% Igepal, F50	> 25.0 hr	> 25.0 hr	
100% Igepal, Compression Molded, F50	> 500 hr	> 500 hr	
Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Strength ² (Yield, Rotational Molded)	2300 psi	15.9 MPa	ASTM D638
Tensile Elongation ²			ASTM D638
Break, Rotational Molded	400 %	400 %	
Flexural Modulus - 1% Secant (Rotational Molded)	84000 psi	579 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	45 ft·lb	61 J	
-40°F (-40°C), 0.250 in (6.35 mm), Rotational Molded	175 ft·lb	237 J	
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Deflection Temperature Under Load			ASTM D648
66 psi (0.45 MPa), Unannealed, Rotational Molded	124 °F	51.1 °C	
264 psi (1.8 MPa), Unannealed, Rotational Molded	104 °F	40.0 °C	

Notes

¹ Compression Molded

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

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Company Information

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

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