

Technical Data Sheet



Polyaxis HD 4220

High Density Polyethylene
LyondellBasell Industries
Rotomolding

Product Description

PolyAxis HD 4220 is a high density polyethylene intended for the rotational molding industry. Offers outstanding stiffness and processability.

General

Material Status	• Commercial: Active	
Availability	• North America	
Features	• Good Moldability • Good Stiffness	• Hexene Comonomer • UV Resistant
Uses	• General Purpose • Outdoor Applications	• Safety Guards • Tanks
Appearance	• Colors Available	
Forms	• Powder	
Processing Method	• Rotational Molding	

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density / Specific Gravity	0.942	0.940 g/cm ³	ASTM D1505
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	2.0 g/10 min	2.0 g/10 min	ASTM D1238
Environmental Stress-Cracking Resistance (ESCR)			ASTM D1693
10% Igepal, Compression Molded, F50	40.0 hr	40.0 hr	
100% Igepal, Compression Molded, F50	560 hr	560 hr	
Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Strength ¹ (Yield, Rotational Molded)	2800 psi	19.3 MPa	ASTM D638
Tensile Elongation			ASTM D638
Break, Rotational Molded	10 %	10 %	
Flexural Modulus - 1% Secant (Rotational Molded)	130000 psi	896 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	> 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	135 °F	57.2 °C	
264 psi (1.8 MPa), Unannealed	100 °F	37.8 °C	
Peak Melting Temperature	264 °F	129 °C	ASTM D3418

Notes

¹ 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

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

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