

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

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.