Technical Data Sheet

Icorene 4220

High Density Polyethylene
LyondellBasell Industries
Rotomolding

Product Description
ICORENE® 4220 is a high density polyethylene for rotational molding applications. The grade is UV stabilized and suitable for applications requiring good stiffness and processability.

General			
Additive	• UV Stabilizer		
Features	• Good Toughness	• UV Resistant	
Uses	• General Purpose	• Outdoor Applications	• Safety Guards
Appearance	• Natural Color		
Forms	• Powder		
Processing Method	• Rotational Molding		

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	0.940 to 0.944 g/cm³	0.940 to 0.944 g/cm³	ASTM D1505
Melt Mass-Flow Rate (MFR) (190°c/2.16 Kg)	1.5 to 2.5 g/10 min	1.5 to 2.5 g/10 min	ASTM D1238
Environmental Stress-Cracking Resistance (ESCR)			
10% Igepal, F50	50.0 hr	50.0 hr	ASTM D1693
100% Igepal, F50	400 hr	400 hr	ASTM D1693A
Mechanical	**Nominal Value (English)**	**Nominal Value (SI)**	**Test Method**
Tensile Strength [1] (Yield)	3300 psi	22.8 MPa	ASTM D638
Flexural Modulus - 1% Secant [2]	145000 psi	1000 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	58 ft·lb	79 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	146 °F	63.3 °C	
264 Psi (1.8 Mpa), Unannealed, 0.00492 In (0.125 Mm), Rotational Molded	108 °F	42.2 °C	

Additional Information
Test data based on natural, unpigmented resin.

Notes

[1] 2.0 in/min (50 mm/min)

[2] 0.051 in/min (1.3 mm/min)

Notes

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