

Technical Data Sheet

Icorene 1440

High Density Polyethylene
LyondellBasell Industries
Rotomolding

Product Description

ICORENE® 1440 is a hexene high density polyethylene specifically developed for use in rotational moulding.

This grade is designed for use in large tanks including agriculture and chemical storage containers and underground & infrastructure applications. Also this grade is highly resistant against the harmful effect of biodiesel fuel.

ICORENE® 1440 has good overall mouldability, extremely high ESCR and impact strength (especially at low temperatures).

General

Additive	• Antioxidant	• UV Stabilizer	
Features	• Good Moldability • Good Toughness	• High ESCR (Stress Crack Resist.) • High Rigidity	• Low Temperature Impact Resistance • UV Resistant
Uses	• Agricultural Tanks	• Tanks	
Appearance	• Black	• Natural Color	• Unspecified Color
Forms	• Powder		
Processing Method	• Rotational Molding		

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	0.940 g/cm ³	0.940 g/cm ³	ASTM D1505
Melt Mass-Flow Rate (MFR) (190°C/2.16 Kg)	4.0 g/10 min	4.0 g/10 min	ASTM D1238
Environmental Stress-Cracking Resistance (ESCR) 122°F (50°C), 10% Igepal, F50	> 1000 hr	> 1000 hr	ASTM D1693B

Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Modulus	109000 psi	750 MPa	ISO 527
Tensile Strength (Yield)	2760 psi	19.0 MPa	ISO 527-1
Tensile Strain			ISO 527-1
Yield	9.0 %	9.0 %	
Break	> 450 %	> 450 %	

Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Impact Strength			ISO 8256/A
-22°F (-30°C)	57.1 ft·lb/in ²	120 kJ/m ²	
73°F (23°C)	126 ft·lb/in ²	265 kJ/m ²	
Impact Strength			ARM
-40°F (-40°C), 0.118 In (3.00 Mm), Rotational Molded	> 55 ft·lb	> 75 J	

Hardness	Nominal Value (English)	Nominal Value (SI)	Test Method
Shore Hardness (Shore D, Rotational Molded)	58	58	ISO 868

Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Vicat Softening Temperature	237 °F	114 °C	ISO 306/A50

Notes

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