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/cm³	0.940 g/cm³	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)			ASTM D1693B
122°f (50°c), 10% Igepal, F50	> 1000 hr	> 1000 hr	
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/in²	120 kJ/m²	
73°f (23°c)	126 ft·lb/in²	265 kJ/m²	
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.