Technical Data Sheet

Icorene 1440 NAT 0000

High Density Polyethylene

Product Description

Icorene 1440 is a UV stabilised hexene high density polyethylene specifically developed for use in rotational moulding.This grade is typically used by customers to manufacture large water, fuel or chemical tanks and also underground infrastructure parts.*Icorene* 1440 has good overall mouldability, extremely high ESCR and impact strength (especially at low temperatures).This grade is designed to have improved resistance against the harmful effect of biodiesel fuel.It is not intended for use in medical and pharmaceutical applications.

Regulatory Status

For regulatory compliance information, see *Icorene* 1440 NAT 0000 Product Stewardship Bulletin (PSB) and Safety Data Sheet (SDS).

Status	Commercial: Active
Availability	Europe
Processing Method	Rotomolding
Attribute	Good Moldability; Good Toughness; High ESCR (Environmental Stress Cracking Resistance); High Rigidity; Low Temperature Impact Resistance; UV Resistant
Forms	Powder
Appearance	Black; Natural Color; Unspecified Color
Additive	Antioxidant; UV Stabilizer
Application	Agricultural Tanks; Tanks

Typical Properties	Nominal Value	Units	Test Method
Physical			
Melt Flow Rate, (190 °C/2.16 kg)	4.0	g/10 min	ISO 1133
Density	0.940	g/cm³	ISO 1183
Mechanical			
Tensile Modulus	750	MPa	ISO 527
Tensile Strength at Yield	19.0	MPa	ISO 527-1
Tensile Strain at Yield	9.0	%	ISO 527-1
Tensile Strain at Break	>450	%	ISO 527-1
Environmental Stress Crack Resistance, (Condition B, F50, 10% Igepal, 50 °C)	>10000	hr	ASTM D1693
Impact			
Impact Strength, (-40 °C, 3.20 mm, Rotational Molded)	>75	J	ARM
Tensile Impact Strength			
(Method A, -30 °C)	120	kJ/m²	ISO 8256
(Method A, 23 °C)	265	kJ/m²	ISO 8256
Hardness			
Shore Hardness, (Shore D, Rotational Molded)	58		ISO 868
Thermal			
Vicat Softening Temperature, (A (10N), 50 °C/h)	114	°C	ISO 306
Deflection Temperature Under Load Unannealed (0.45 MPa)	59	°C	ISO 75-2/B

Manufacturer website: https://www.lyondellbasell.com/en/

Melting Temperature	127 °C	DSC

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.

Company Information

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

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