

Technical Data Sheet

lcorene 1440 NAT 0000



High Density Polyethylene

Product Description

lcorene 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. *lcorene* 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.

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/cm ³	ISO 1183
Mechanical			
Tensile Strength at Yield	19.0	MPa	ISO 527-1
Environmental Stress Crack Resistance, (Condition B, F50, 10% Igepal, 50 °C)	>10000	hr	ASTM D1693
Tensile Strain at Break	>450	%	ISO 527-1
Tensile Strain at Yield	9.0	%	ISO 527-1
Tensile Modulus	750	MPa	ISO 527
Impact			
Impact Strength, (-40 °C, 3.20 mm, Rotational Molded)	>75	J	ARM
Tensile Impact Strength			
(Method A, -30 °C)	120	kJ/m ²	ISO 8256
(Method A, 23 °C)	265	kJ/m ²	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
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/>.

© LyondellBasell Industries Holdings, B.V. 2018

Disclaimer

Information in this document is accurate to the best of our knowledge at the date of publication. The document is designed to provide users general information for safe handling, use, processing, storage, transportation, disposal and release and does not constitute any warranty or quality specification, either express or implied, including any warranty of merchantability or fitness for any particular purpose. Users shall determine whether the product is suitable for their use and can be used safely and legally.

In addition to any prohibitions of use specifically noted in this document, LyondellBasell may further prohibit or restrict the sale of its products into certain applications. For further information, please contact a LyondellBasell representative.

Trademarks

The Trademark referenced within the product name is owned or used by the LyondellBasell family of companies.