

Technical Data Sheet



Icorene 3940

High Density Polyethylene
LyondellBasell Industries
Rotomolding

Product Description

ICORENE® 3940 is a high density polyethylene specifically developed for rotational moulding.

This grade is suitable for use in general purpose applications. It has a good balance of properties such as toughness and stiffness.

General

Material Status	• Commercial: Active		
Availability	• Europe		
Additive	• UV Stabilizer		
Features	• Food Contact Acceptable • General Purpose	• Good Processability • Good Stiffness	• Good Toughness • UV Resistant
Uses	• Containers	• General Purpose	• Tanks
Appearance	• Natural Color	• Unspecified Color	
Forms	• Powder		
Processing Method	• Rotational Molding		

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	0.939 g/cm ³	0.939 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), 100% Igepal	> 1000 hr	> 1000 hr	ASTM D1693
Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Strength ^{1,2}			ISO 527-1
Yield, 73°F (23°C), 0.126 in (3.20 mm)	2760 psi	19.0 MPa	
Break, 73°F (23°C), 0.126 in (3.20 mm)	2900 psi	20.0 MPa	
Tensile Elongation ^{1,2}			ISO 527-1
Break, 73°F (23°C), 0.126 in (3.20 mm)	> 280 %	> 280 %	
Flexural Modulus	106000 psi	730 MPa	ISO 178
Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Drop Impact Resistance ³ (-4°F (-20°C))	3.82 in-lb/mil	170 J/cm	Internal Method
Hardness	Nominal Value (English)	Nominal Value (SI)	Test Method
Durometer Hardness (Shore D)	60	60	ISO 868
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Vicat Softening Temperature	244 °F	118 °C	ISO 306/A
Melting Temperature	262 °F	128 °C	DSC

Notes

¹ 2.0 in/min (50 mm/min)

² Test based on ISO 527/1B, Rotational molded

³ Based on ISO 6603

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.

Product Storage and Handling

- Product should be stored in dry conditions at temperatures below 50°C and protected from UV-light
- Improper storage may bring damage to the packaging and can negatively affects on the quality of this product
- Keep material completely dry for good processing

Technical Data Sheet

**Icorene 3940**

High Density Polyethylene
LyondellBasell Industries
Rotomolding

Company Information

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

© LyondellBasell Industries Holdings, B.V. 2024

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.