Technical Data Sheet

# *Icorene* 1440 AO+ UV+ BUE 5144

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.

| | |
|---|---|
| **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 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/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 |
| 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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