

Technical Data Sheet

**Microthene MP643962**

Linear Medium Density Polyethylene
LyondellBasell Industries
Engineering Plastics

Product Description

Microthene MP643962 is a linear medium density polyethylene powder selected by customers for rotomolding a variety of objects, including drums, agricultural and chemical storage containers, playground equipment and municipal trash containers. MP643962 is a UV-stabilized, 35-mesh powder and is also available in pellet form as Petrothene GA643962.

General

Material Status	• Commercial: Active		
Availability	• North America		
Additive	• UV Stabilizer		
Uses	• Agricultural Applications	• Drums	
	• Containers	• Industrial Containers	
Forms	• Powder		
Processing Method	• Rotational Molding		

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	0.940 g/cm ³	0.940 g/cm ³	ASTM D1505
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	3.6 g/10 min	3.6 g/10 min	ASTM D1238
Environmental Stress-Cracking Resistance (ESCR) 100% Igepal CO-630, F50	> 1000 hr	> 1000 hr	ASTM D1693A
Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Strength ¹ (Yield)	2900 psi	20.0 MPa	ASTM D638
Flexural Modulus			ASTM D790
1% Secant	119000 psi	820 MPa	
2% Secant	101000 psi	696 MPa	
Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Impact Strength			ARM
-40°F (-40°C), 0.125 in (3.18 mm)	40 ft·lb	54 J	
-40°F (-40°C), 0.250 in (6.35 mm)	160 ft·lb	217 J	
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Deflection Temperature Under Load			ASTM D648
66 psi (0.45 MPa), Unannealed	136 °F	58.0 °C	
264 psi (1.8 MPa), Unannealed	104 °F	40.0 °C	

Notes

¹ 2.0 in/min (51 mm/min)

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

Company Information

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

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