

Safrene® (High Density PolyEthylene)

Technical Data Sheet
M 7650
High Density Polyethylene for Blow Moulding and Extrusion Applications

Safrene® M 7650 High Density Polyethylene Resin is a bimodal high molecular mass grade suitable for extrusion blow moulding of containers greater than 20 litre capacities. It has a high rigidity and hardness with very good impact strength and excellent environmental stress-crack resistance properties.

Safrene® M 7650 High Density Polyethylene Resin is primarily designed for the blow moulding of large hollow articles but may be used for smaller mouldings where exceptional environmental stress-crack resistance and impact strength are required.

Typical Applications

- General purpose containers
- Sheet extrusion
- Optical fibre sheathing

PROPERTIES ⁽¹⁾	VALUE	UNIT	TEST METHOD
Physical			
Melt Flow Rate, 190 °C/ 5 kg	0.35	g/10min	ISO 1133
Melt Flow Rate, 190 °C/ 21.6 kg	9.5	g/10min	ISO 1133
Density ⁽²⁾	0.953	g/cm ³	ISO 1183
Mechanical ⁽³⁾			
Hardness Shore D	62	Units	ISO 868
Tensile Yield ⁽⁴⁾	26	MPa	ISO 527
Ultimate Tensile ⁽⁴⁾	40	MPa	ISO 527
Ultimate Elongation ⁽⁴⁾	>600	%	ISO 527
Flexural Modulus	1300	MPa	ISO 178
Environmental Stress-Crack Resistance ⁽⁵⁾	>1000	Hours	ASTM D1693
Impact ⁽³⁾			
Charpy Notched Impact Strength (23 °C)	23	kJ/m ²	ISO 179
Charpy Notched Impact Strength (-30 °C)	20	kJ/m ²	ISO 179
Thermal			
Vicat Softening Point (10N)	128	°C	ISO 306/A50
Vicat Softening Point (50N)	80	°C	ISO 306/B50
Crystalline Melting Range	130-133	°C	ISO 3146

⁽¹⁾ Typical values; not to be construed as specification limits.

⁽²⁾ Unannealed

⁽³⁾ Compression moulded samples

⁽⁴⁾ Test speed 50 mm/min

⁽⁵⁾ Bell test condition B, 50 °C, 10% Igepal, F50.

Typical processing conditions	Blow Moulding	Extrusion
Feed Zone (°C)	180	180
Zone1 (°C)	190 - 200	190 - 200
Zone 2 (°C)	200 - 210	200 - 210
Zone 3 (°C)	200	200
Die (°C)	200	200
Melt Temp (°C)	200	200

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Product Stewardship	<p>At Safripol®, protecting people and the environment will be a part of everything we do and every decision we make. Each employee has a primary responsibility in ensuring that our products and operations meet applicable government standards.</p> <p>Our goal is to eliminate all injuries, prevent adverse environment and health impacts, reduce wastes and emissions and promote resource conservation at every stage of the life cycle of our products. The success of this rests with each and every individual involved with Safripol® products throughout the life cycle.</p>
Food Contact Compliance	<p>Safrene® M 7650 High Density Polyethylene Resin should comply with Commission Regulation (EU) No 10/2011 and with U.S. FDA 21 CFR 177.1520(c)3.1c food contact regulations when used unmodified and processed according to good manufacturing practices for food contact applications. The purchaser remains responsible for determining whether the use complies with all relevant regulations.</p>
Customer Notice	<p>Safripol® strongly encourages its customers to review both their manufacturing processes and their applications of Safripol® products from the standpoint of human health and environmental quality to ensure that Safripol® products are not used in ways for which they are not intended or tested. Safripol® personnel are available to answer your questions and to provide reasonable technical support. Safripol® product literature, including safety data sheets, should be consulted prior to use of Safripol® products. Current safety data sheets are available from Safripol®.</p>
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Additional Information

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