

## 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 <sup>(1)</sup>	VALUE	UNIT	TEST METHOD
<b>Physical</b>			
Melt Flow Rate, 190 °C/ 5 kg	0.35	g/10min	ISO 1133
Melt Flow Rate, 190 °C/ 2.16 kg	0.95	g/10min	ISO 1133
Density <sup>(2)</sup>	0.953	g/cm <sup>3</sup>	ISO 1183
<b>Mechanical <sup>(3)</sup></b>			
Hardness Shore D	62	Units	ISO 868
Tensile Yield <sup>(4)</sup>	26	MPa	ISO 527
Ultimate Tensile <sup>(4)</sup>	40	MPa	ISO 527
Ultimate Elongation <sup>(4)</sup>	>600	%	ISO 527
Flexural Modulus	1300	MPa	ISO 178
Environmental Stress-Crack Resistance <sup>(5)</sup>	>1000	Hours	ASTM D1693
<b>Impact <sup>(3)</sup></b>			
Charpy Notched Impact Strength (23 °C)	23	kJ/m <sup>2</sup>	ISO 179
Charpy Notched Impact Strength (-30 °C)	20	kJ/m <sup>2</sup>	ISO 179
<b>Thermal</b>			
Vicat Softening Point (10N)	128	°C	ISO 306/A50
Vicat Softening Point (50N)	78	°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 50mm/min

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

Typical processing conditions	Blow Moulding	Extrusion
Feed Zone (°C)	180	180
Zone 1 (°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

**M 7650**

**High Density Polyethylene for Blow Moulding and Extrusion Applications**

<p><b>Product Stewardship</b></p>	<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>
<p><b>Food Contact Compliance</b></p>	<p>Safrene<sup>®</sup> 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>
<p><b>Customer Notice</b></p>	<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>
<p><b>Safripol Medical Application Policy</b></p>	<p>Safripol will not knowingly sell or sample any product or service ("Product") into any commercial or developmental application that is intended for:</p> <ul style="list-style-type: none"> <li>a. permanent (Long term) contact with internal body fluids or internal body tissues. Long term is a use which exceeds 72 continuous hours.</li> <li>b. use in cardiac prosthetic devices regardless of the length of time involved; (Cardiac prosthetic devices include, but are not limited to, pacemaker leads and devices, artificial hearts, heart valves, intra-aortic balloons and control systems, and ventricular bypass assisted devices);</li> <li>c. use as a critical component in medical devices that support or sustain human life; or</li> <li>d. use specifically by pregnant women or in applications designed specifically to promote or interfere with human reproduction.</li> </ul> <p>Additionally, all Products intended for use in pharmaceutical applications, other than pharmaceutical packaging, must pass the current Pharmaceutical Liability Guidelines.</p> <ul style="list-style-type: none"> <li>● New business opportunities require a business assessment prior to sale or sampling of Safripol products.</li> <li>● Authorized distributors and resellers will adhere to this medical policy.</li> <li>● Safripol does not endorse or claim suitability of their products for specific medical applications. It is the responsibility of the medical device or pharmaceutical manufacturer to determine that the Safripol product is safe, lawful, and technically suitable for the intended use.</li> </ul> <p><b>SAFRIPOL MAKES NO WARRANTIES, EXPRESS OR IMPLIED, CONCERNING THE SUITABILITY OF ANY SAFRIPOL PRODUCT FOR USE IN MEDICAL APPLICATIONS.</b></p>
<p><b>Disclaimer</b></p>	<p>The Customer is responsible for determining whether products and the information in this document are appropriate for the Customer's use and for ensuring that the Customer's workplace and disposal/ recycling practices of our products and packaging are in compliance with applicable laws and other governmental enactments. Safripol assumes no obligation or liability for the information in this document.</p> <p><b>NO WARRANTIES ARE GIVEN; ALL IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ARE EXPRESSLY EXCLUDED.</b></p> <p>NOTICE: If products are described as "experimental" or "developmental": (1) product specifications may not be fully determined; (2) analysis of hazards and caution in handling and use are required; and (3) there is greater potential for Safripol to change specifications and/or discontinue production.</p>

**Additional Information**

Our contact details:	<b>Gauteng:</b> Tel: +27 (0) 11 575 4549
Safripol (Pty) Ltd Private Bag X 52 Bryanston 2021 South Africa	<b>Kwa-Zulu Natal:</b> Tel: +27 (0) 31 450 4111
Website: <a href="http://www.safripol.com">www.safripol.com</a>	Email: <a href="mailto:info@safripol.com">info@safripol.com</a>
Published:	July 2019