

## Safrene® (High Density PolyEthylene)

### Technical Data Sheet

#### M 5650

#### High-Density Polyethylene

Safrene® M 5650 High Density Polyethylene Resin is a bimodal high molecular weight grade specifically designed for extrusion blow moulding of containers greater than 100 litres in volume.

Safrene® M 5650 High Density Polyethylene Resin exhibits outstanding impact strength, high rigidity, and excellent environmental stress-crack resistance. It is an approved grade for UN required applications and is particularly suitable for drum applications between 100 and 2000 litres and satisfies the requirements of SABS 1176 for the transportation of dangerous goods.

#### Typical Applications

- Drums and Industrial chemical containers up to 2000 litres.

PROPERTIES <sup>(1)</sup>	VALUE	UNIT	TEST METHOD
<b>Physical</b>			
Melt Flow Rate, 190 °C/ 5 kg	0.17	g/10min	ISO 1133
Melt Flow Rate, 190 °C/ 21.6 kg	4.1	g/10min	ISO 1133
Density <sup>(2)</sup>	0.952	g/cm <sup>3</sup>	ISO 1183
<b>Mechanical <sup>(3)</sup></b>			
Hardness Shore D	63	Units	ISO 868
Tensile Yield <sup>(4)</sup>	26	MPa	ISO 527
Ultimate Tensile <sup>(4)</sup>	46	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)	>50	kJ/m <sup>2</sup>	ISO 179
Charpy Notched Impact Strength (-30 °C)	45	kJ/m <sup>2</sup>	ISO 179
<b>Thermal</b>			
Vicat Softening Point A (10N)	129	°C	ISO 306/A
Vicat Softening Point B (50N)	80	°C	ISO 306/B
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
Feed Zone (°C)	170 - 190
Zone 1 (°C)	180 - 200
Zone 2 (°C)	200 - 220
Zone 3 (°C)	200 - 220
Die (°C)	200 - 210
Melt Temp (°C)	200 - 220

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<b>Product Stewardship</b>	<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 waste 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>
<b>Food Contact Compliance</b>	<p>Safrene® M 5650 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 intended use complies with all relevant regulations.</p>
<b>Customer Notice</b>	<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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