

**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/ 21.6 kg	9.5	g/10min	ISO 1133
Density <sup>(2)</sup>	0.953	g/cm <sup>3</sup>	ISO 1183
<b>Mechanical</b> <sup>(3)</sup>			
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</b> <sup>(3)</sup>			
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)	80	°C	ISO 306/B50
Crystalline Melting Range	130-133	°C	ISO 3146

<sup>(1)</sup> Typical values; not to be construed as specification limits.

<sup>(2)</sup> Unannealed

<sup>(3)</sup> Compression moulded samples

<sup>(4)</sup> Test speed 50 mm/min

<sup>(5)</sup> 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

# M 7650

## High Density Polyethylene for Blow Moulding and Extrusion Applications

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