

**Safrene®** (High Density PolyEthylene)

**Technical Data Sheet**
**E 5560**
**High Density Polyethylene for Compression Moulding Applications**

Safrene® E 5560 High Density Polyethylene Resin is designed for compression moulding applications. Having excellent mechanical strength, toughness, environmental stress-crack resistance and good processability, it is especially suitable for the production of carbonated soft drink closures.

**Typical Applications**

- Caps and closures for carbonated and non-carbonated beverage applications

PROPERTIES <sup>(1)</sup>	VALUE	UNIT	TEST METHOD
<b>Physical</b>			
Melt Flow Rate, 190 °C/ 5 kg	1.5	g/10min	ISO 1133
Melt Flow Rate, 190 °C/ 2.16 kg	0.3	g/10min	ISO 1133
Density <sup>(2)</sup>	0.957	g/cm <sup>3</sup>	ISO 1183
<b>Mechanical</b> <sup>(3)</sup>			
Tensile Yield <sup>(4)</sup>	28	MPa	ISO 527
Flexural Modulus	1450	MPa	ISO 178
Environmental Stress-Crack Resistance <sup>(5)</sup>	150	hours	ASTM D1693
<b>Impact</b> <sup>(3)</sup>			
Charpy Notched Impact Strength (23 °C)	12	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 Point	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	Compression Moulding
Feed Zone (°C)	160 - 170
Zone1 (°C)	170 - 180
Zone 2 (°C)	170 - 180
Zone 3 (°C)	180 - 190
Die (°C)	190 - 200
Melt Temp (°C)	190 - 200

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<p><b>Food Contact Compliance</b></p>	<p>Safrene® E 5560 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>
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