

Safrene® (High Density PolyEthylene)

Technical Data Sheet

E 4055

HIGH DENSITY POLYETHYLENE FOR COMPRESSION MOULDING APPLICATIONS

Safrene® E 4055 is a High Density Polyethelene Resin suitable for Compression Moulding applications.

Typical Applications:

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

Safrene® E 4055 has excellent mechanical strength, toughness, optimum viscosity (flow) and excellent Environmental Stress Cracking Resistance (ESCR) properties. It is especially suitable for the production of carbonated soft drink closures.

PROPERTIES ⁽¹⁾	VALUE	UNIT	TEST METHOD
Physical			
Melt flow rate, 190°C/5kg	3.8	g/10min	ISO 1133
Melt flow rate, 190°C/2.16kg	0.9	g/10min	ISO 1133
Density ⁽²⁾	0.956	g/cm ³	ISO 1183
Mechanical⁽³⁾			
Tensile Yield ⁽⁴⁾	28	MPa	ISO 527
Flexural Modulus	1400	MPa	ISO 178
Environmental Stress-Crack Resistance ⁽⁵⁾	550	hours	ASTM D1693
Impact⁽³⁾			
Charpy Notched Impact Strength(23°C)	4.5	kJ/m ²	ISO 179
Thermal			
Vicat Softening Point (10N)	126	°C	ISO 306/A50
Vicat Softening Point (50N)	80	°C	ISO 306/B50
Crystalline Melting Point	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	Compression Moulding
Feed Zone (°C)	160 – 170
Zone 1 (°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>Product Stewardship</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>Food Contact Compliance</p>	<p>Safrene® E 4055 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>Customer Notice</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>
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Additional Information

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