

Safrene™ (High Density PolyEthylene)

Technical Data Sheet

H 4765

High Density Polyethylene for Blow Moulding Applications

Safrene® H 4765 High Density Polyethylene Resin is a bimodal medium molecular mass grade with good processing properties.

Safrene® H 4765 High Density Polyethylene Resin is recommended for small part blow moulding applications up to 20 litres in volume where good impact, excellent stiffness and environmental stress-crack resistance are required.

Typical Applications

- Milk and Fruit juice containers
- Cosmetics, toiletries and household care products
- General purpose containers

PROPERTIES ⁽¹⁾	VALUE	UNIT	TEST METHOD
Physical			
Melt Flow Rate, 190 °C/ 5 kg	1.4	g/10min	ISO 1133
Melt Flow Rate, 190 °C/ 2.16 kg	0.33	g/10min	ISO 1133
Density ⁽²⁾	0.958	g/cm ³	ISO 1183
Mechanical ⁽³⁾			
Hardness Shore D	64	Units	ISO 868
Tensile Yield ⁽⁴⁾	29	MPa	ISO 527
Ultimate Tensile ⁽⁴⁾	34	MPa	ISO 527
Ultimate Elongation ⁽⁴⁾	>600	%	ISO 527
Flexural Modulus	1450	MPa	ISO 178
Environmental Stress-Crack Resistance ⁽⁵⁾	150	Hours	ASTM D1693
Impact ⁽³⁾			
Charpy Notched Impact Strength (23 °C)	13	kJ/m ²	ISO 179
Charpy Notched Impact Strength (-30 °C)	9	kJ/m ²	ISO 179
Thermal			
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
Feed Zone (°C)	160 - 180
Zone 1 (°C)	170 - 190
Zone 2 (°C)	180 - 200
Zone 3 (°C)	180 - 190
Die (°C)	190 - 200
Melt Temp (°C)	190 - 200

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Food Contact Compliance	<p>Safrene[®] H 4765 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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Published:

July 2019