



## SABIC® LLDPE 6318BE

### Linear low density polyethylene for Cast film

#### Description

SABIC® LLDPE 6318BE is a C6-LLDPE for cast film applications. The product has been specially formulated for optimum thermal stability at high temperatures used in cast film extrusion. Films produced from this grade exhibit excellent optical properties, toughness, puncture resistance and tear strength. The suffix E denotes European origin.

#### Application

SABIC® LLDPE 6318BE resin is recommended for pallet stretch wrap (pre-stretch), high performance draw down films and other mono layer and coextruded film applications where high strength is required. The grade is also suggested for blending with ethylene/butene copolymer LLDPE and LDPE for improving strength.

#### Film properties

Properties are determined on 20 µm cast stretch film produced on a 2 m commercial cast stretch line: melt temperature 270 °C, chill roll temperature 20 °C and line speed 450 m/min.

#### Processing conditions

SABIC® LLDPE 6318BE is extrudable with conventional cast film extrusion equipment. Temperatures 250-300°C.

#### Typical data.

Revision 20061116

Properties	Units SI	Values	Test methods
<b>Polymer properties</b>			
<b>Melt flow rate (MFR)</b> at 190 °C and 2.16 kg	g/10 min	<b>2.8</b>	ISO 1133
<b>Density</b>	kg/m <sup>3</sup>	<b>920</b>	ISO 1183 (A)
<b>Formulation</b>			
<b>Anti oxidant</b>	mg/kg	<b>+</b>	SABIC method
<b>Optical properties</b>			
<b>Gloss (45°)</b>	‰	<b>90</b>	ASTM D 2457
<b>Haze</b>	%	<b>1.8</b>	ASTM D 1003A
<b>Film properties</b>			
<b>Dart impact</b>	kJ/m	<b>1.8</b>	ISO 7765-2
<b>Tear strength TD</b>	kN/m	<b>246</b>	ISO 6383-2
<b>Protrusion Puncture resistance</b>	J	<b>2.7</b>	ASTM D 5748-95
<b>Elastic recovery &amp; Stress retention</b>			
Elastic recovery	%	<b>56.2</b>	ASTM D 5459-95
Stress retention	%	<b>77.8</b>	
<b>Peel cling</b>			
0% pre-stretch	N/mm	<b>0.09</b>	ASTM D 5458-95
200% pre-stretch	N/mm	<b>0.04</b>	
<b>Thermal properties</b>			
<b>Vicat softening temperature</b> at 10 N (VST/A)	°C	<b>105</b>	ISO 306
<b>DSC test</b> melting point	°C	<b>125</b>	SABIC method
<b>HighLight properties</b>			
<b>Ultimate pre-stretch level</b>	%	<b>290</b>	-
<b>Retention force at 60 sec</b>	kg	<b>0.95</b>	-

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**General information.** SABIC Europe's assortment contains both butene and hexene grades for cast and blown film.

SABIC® LLDPE, produced by gasphase technology, is characterized by a high purity, an excellent extrusion performance and draw down capability. SABIC® LLDPE can be used in versatile mono and co-extrusion applications, pure or in blends with LDPE. SABIC® LLDPE is stabilized with an anti oxidant package suitable for all film applications.

**Health, Safety and Food Contact regulations.** Detailed information is provided in the relevant Material Safety Datasheet and or Standard Food Declaration, available on the Internet ([www.SABIC-europe.com](http://www.SABIC-europe.com)). Additional specific information can be requested via your local Sales Office.

**Quality.** SABIC Europe is fully certified in accordance with the internationally accepted quality standard ISO 9001-2000. It is SABIC Europe's policy to supply materials that meet customers specifications and needs and to keep up its reputation as a pre-eminent, reliable supplier of e.g. polyethylenes.

**Storage and handling.** Polyethylenes resins (in pelletised or powder form) should be stored in such a way that it prevents exposure to direct sunlight and/or heat, as this may lead to quality deterioration. The storage location should also be dry, dust free and the ambient temperature should not exceed 50 °C. Not complying with these precautionary measures can lead to a degradation of the product which can result in colour changes, bad smell and inadequate product performance. It is also advisable to process polyethylene resins (in pelletised or powder form) within 6 months after delivery, this because also excessive aging of polyethylene can lead to a deterioration in quality.

**Environment and recycling.** The environmental aspects of any packaging material do not only imply waste issues but have to be considered in relation with the use of natural resources, the preservations of foodstuffs, etc. SABIC Europe considers polyethylene to be an environmentally efficient packaging material. Its low specific energy consumption and insignificant emissions to air and water designate polyethylene as the ecological alternative in comparison with the traditional packaging materials. Recycling of packaging materials is supported by SABIC Europe whenever ecological and social benefits are achieved and where a social infrastructure for selective collecting and sorting of packaging is fostered. Whenever 'thermal' recycling of packaging (i.e. incineration with energy recovery) is carried out, polyethylene -with its fairly simple molecular structure and low amount of additives- is considered to be a trouble-free fuel.