

# SABIC® LLDPE 318BJ

## LINEAR LOW DENSITY POLYETHYLENE

### DESCRIPTION

SABIC® LLDPE 318BJ is a butene linear low density polyethylene resin typically designed for easy processing and specially formulated for optimum thermal stability at high temperatures used in cast film extrusion. Cast film produced from SABIC® LLDPE 318BJ exhibit excellent optical properties, puncture resistance and tear strength. SABIC® LLDPE 318BJ is TNPP free. This product is not intended for and must not be used in any pharmaceutical/medical applications.

### TYPICAL APPLICATIONS

SABIC® LLDPE 318BJ resin is typically used for hand and pallet stretch wrap, cling film, melt embossed film and other general-purpose application.

### TYPICAL PROPERTY VALUES

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
<b>POLYMER PROPERTIES</b>			
<b>Melt Flow Rate (MFR)</b>			
at 190 °C and 2.16 kg	2.8	dg/min	ASTM D1238
<b>Density</b>	918	kg/m <sup>3</sup>	ASTM D1505
<b>MECHANICAL PROPERTIES <sup>(1)</sup></b>			
<b>Tensile test</b>			
stress at break	13	MPa	ASTM D638
strain at yield	16	%	ASTM D638
stress at yield	12	MPa	ASTM D638
strain at break	710	%	ASTM D638
<b>Flexural test</b>			
Secant modulus at 1% elongation	251	MPa	ASTM D790
<b>Hardness Shore D <sup>(2)</sup></b>	48	-	ISO 868
<b>OPTICAL PROPERTIES <sup>(1)</sup></b>			
<b>Gloss (45°)</b>	91	%	ASTM D2457
<b>Haze <sup>(1)</sup></b>	2.1	%	ASTM D1003
<b>FILM PROPERTIES <sup>(1)</sup></b>			
<b>Dart impact</b>	2.6	kJ/m	ISO 7765-2
<b>Tear strength TD</b>	140	kN/m	ISO 6383-2
<b>Protrusion Puncture resistance</b>	2.0	J	ASTM D5748-95
<b>Elastic recovery &amp; Stress retention</b>			
Elastic recovery	51.9	%	ASTM D5459-95
Stress retention	78.1	%	ASTM D5459-95
<b>THERMAL PROPERTIES</b>			
<b>Vicat Softening Temperature</b>			
at 10 N (VST/A)	102	°C	ISO 306
<b>DSC test</b>			
melting point	121	°C	SABIC method
<b>ELECTRICAL PROPERTIES</b>			
<b>Volume resistivity</b>	8.5E15	Ω.cm	ASTM D257

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Dissipation factor at 60 Hz	5.0E-4	-	ASTM D150
Dielectric constant at 60 Hz	2.2	-	ASTM D150
Dielectric strength at 2000 V/sec	>30	V/ $\mu$ m	ASTM D149

(1) Properties have been measured by producing 30  $\mu$ m film with 2.5 BUR using 100% 318BJ.

(2) Properties are determined on 20  $\mu$ m cast stretch film produced on a 2 m commercial cast stretch line: melt temperature 270 °C, chill roll temperature 20 °C and line speed of 450 m/min