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 typcially used for hand and pallet stretch wrap, cling film, melt embossed film and other genera-purpose application.

TYPICAL PROPERTY VALUES

Revision 20260319

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
POLYMER PROPERTIES			
Melt Flow Rate (MFR)			
at 190 °C and 2.16 kg	2.8	dg/min	ASTM D1238
Density	918	kg/m³	ASTM D1505
MECHANICAL PROPERTIES [1]			
Tensile test			
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
Flexural test			
Secant modulus at 1% elongation	251	MPa	ASTM D790
Hardness Shore D [2]	48	-	ISO 868
OPTICAL PROPERTIES [1]			
Gloss (45°)	91	‰	ASTM D2457
Haze [1]	2.1	%	ASTM D1003
FILM PROPERTIES [1]			
Dart impact	2.6	kJ/m	ISO 7765-2
Tear strength TD	140	kN/m	ISO 6383-2
Protrusion Puncture resistance	2.0	J	ASTM D5748-95
Elastic recovery & Stress retention			
Elastic recovery	51.9	%	ASTM D5459-95
Stress retention	78.1	%	ASTM D5459-95
THERMAL PROPERTIES			
Vicat Softening Temperature			
at 10 N (VST/A)	102	°C	ISO 306
DSC test			
melting point	121	°C	SABIC method
ELECTRICAL PROPERTIES			
Volume resistivity	8.5E15	Ω.cm	ASTM D257

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Dissipation Factor			
@ 60 Hz	5.0E-4	-	ASTM D150
Dielectric Constant			
@ 60 Hz	2.2	-	ASTM D150
Dielectric Strength			
at 2000 V/sec	>30	V/µm	ASTM D149

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

(2) Properties are determinedon 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 of 450 m/min

PROCESSING CONDITIONS

SABIC® LLPDE 318BJ is extrudable with conventional cast film extrusion equipment. Minor machine modifications may be required for optimum use.

Cast film melt temperature: 250 - 300°C Chill roll temperature: 20°C

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.

STORAGE AND HANDLING

Polyethylene resins should be stored in a manner to prevent a direct exposure to sunlight and/or heat. The storage area should also be dry and preferably do not exceed 50°C. SABIC would not give warranty to bad storage conditions, which may lead to quality deterioration such as color change, bad smell and inadequate product performance. It is advisable to process Polyethylene resins within 6 months after delivery.

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