



SABIC® LLDPE 118W

Linear low density polyethylene for Blown film

Description

SABIC® LLDPE 118W is a butene-linear low density polyethylene resin for general purpose applications. Films produced from this resin are tough with excellent puncture resistance, high tensile strength and good hottack properties. The resin contains anti block and slip erucamide.

Application

Typical applications for SABIC® LLDPE 118W are shipping sacks, ice bags, frozen food bags, liners, carrier bags, garbage bags, films for meatwrap, consumer packaging and high clarity film if blended with (10-20%) LDPE.

Film properties

Film of 50 µm and BUR=2 has been produced on Kiefel IBC with 140 kg/h. Die size 200 mm, die gap 2,7 mm.

Typical data.

Revision 20060329

Properties	Units SI	Values	Test methods
Polymer properties			
Melt flow rate (MFR) at 190 °C and 2.16 kg	g/10 min	1.0	ISO 1133
Density	kg/m ³	918	ISO 1183 (A)
Formulation			
Slip	mg/kg	1500	SABIC method
Anti block	mg/kg	3500	SABIC method
Anti oxidant	mg/kg	+	SABIC method
Optical properties			
Gloss (45°)	%	42	ASTM D 2457
Haze	%	20	ASTM D 1003A
Clarity	mV	20	SABIC method
Film properties			
Impact strength	kJ/m	22	ASTM D 4272
Tear strength TD	kN/m	120	ISO 6383-2
Tear strength MD	kN/m	40	ISO 6383-2
Puncture resistance	J/m	380	SABIC method
Tensile test film			ISO 527-3
Yield stress TD	MPa	11	
Yield stress MD	MPa	11	
Stress at break TD	MPa	30	
Stress at break MD	MPa	37	
Strain at break TD	%	800	
Strain at break MD	%	600	
Modulus of elasticity TD	MPa	180	
Modulus of elasticity MD	MPa	160	
Coefficient of friction	-	0.1	ISO 8295
Blocking	g	15	SABIC method
Re-blocking	g	10	SABIC method
Thermal properties			
Vicat softening temperature at 10 N (VST/A)	°C	101	ISO 306/B
DSC test melting point	°C	121	SABIC method

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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). 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.



218 Series

Linear Low Density Polyethylene for Blown Film

Product Description

218 series resins are Linear Low Density Polyethylene grades suitable for general purpose packaging. They are easy to process giving good tensile properties, impact strength and optical properties.

218 Series includes following grades:

218N: No Slip & No Antiblock

218W: 1500 ppm Slip & 3500 ppm Antiblock

Typical Applications

Lamination film, thin liners, shopping bags, carrier bags, garbage bags, coextruded films, consumer packaging etc.

Typical data

Properties	Unit	Value ⁽¹⁾	ASTM Method
Resin Properties			
Melt Flow Rate @ 190°C & 2.16 kg load	g/10 min.	2	D 1238
Density @ 23°C	kg/m ³	918	D 1505
Mechanical Properties ⁽²⁾			
Tensile Strength @ break, MD	MPa	35	D 882
TD		29	
Tensile Elongation @ break, MD	%	700	D 882
TD		750	
Tensile Strength @ yield, MD	MPa	12	D 882
TD		10	
1% Secant Modulus, MD	MPa	220	D 882
TD		260	
Puncture Resistance	J/mm	63	SABIC Method
Dart Impact Strength	g	85	D 1709
Elmendorf Tear Strength, MD	g	130	D 1922
TD		320	
Optical Properties ⁽²⁾			
Haze	%	13	D 1003
Gloss @ 60°	-	80	D 2457
Thermal Properties			
Vicat Softening Point	°C	98	D 1525

(1) Typical values; not to be construed as specification limits.

(2) Properties have been measured by producing 30 µ film with 2.5 BUR using 100% 218N.

Processing Conditions

Typical processing conditions for 218 are:

Melt temperature: 185 - 205°C

Blow up ratio: 2 - 3

Food Regulation

218 series resins are suitable for Food contact application. Detailed information is provided in relevant Material Safety Datasheet and for additional specific information please contact SABIC local representative for certificate.

Storage and Handling

Polyethylene resin 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 don't 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 PE resin within 6 months after delivery.

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