

**TECHNICAL DATA SHEET****LLDPE – 118W – (LINEAR LOW-DENSITY POLYETHYLENE)****Product 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.

Typical Application:

Typical applications for SABIC® LLDPE 118W are shipping sacks, ice bags, frozen food bags, liners, carrier bags, garbage bags, agriculture films, lamination and coextruded films, shrink film (for blending with LDPE), industrial 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. The product mentioned herein is in particular not tested and therefore not validated for use in pharmaceutical/ medical applications.

Origin: SAUDI

➤ SABIC

Properties	Test Method	Units	Value
<u>Polymer properties</u>			
Melt Flow Rate (MFR)	ISO 1133		
At 190°C and 2.16kg	ISO 3146	dg/min	1.0
Density ¹⁾	ISO 1183(A)	Kg/m ³	918
<u>Formulation</u>			
Slip	Sabic method	mg/kg	1500
Anti-block	Sabic method	mg/kg	3500
Anti-oxidant	Sabic method		+
<u>OPTICAL PROPERTIES</u>			
Gloss (45°)	ASTM D 2457	‰	42
Haze	ASTM D 1003A	%	20
<u>Film Properties</u>			
Impact Strength	ASTM D 4272	kJ/m	22
Tear Strength TD	ISO 6383-2	kN/m	120
Tear Strength MD	ISO 6383-2	kN/m	40
Puncture resistance	SABIC method	J/m	380



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	ISO 8295	-	0.1
Blocking	SABIC method	g	15
Re-blocking	SABIC method	g	10
<u>Thermal properties</u>			
Vicat softening temperature	ISO 306		
at 10 N (VST/A)		°C	101
DSC test	SABIC method		
melting point		°C	121

✧ **General information**

SABIC Europe's assortment contains both butene and hexene grades for cast and blown film. SABIC® LLDPE, produced by gas phase 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.

✧ **Storage and Handling**

Polyethylene's resins (in pelletized 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 pelletized 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 number of additives- is considered to be a trouble-free fuel.