

# SABIC<sup>®</sup> LLDPE 118WE

LINEAR LOW DENSITY POLYETHYLENE

## DESCRIPTION

SABIC<sup>®</sup> LLDPE 118WE 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, good hottack properties and low gel levels. The resin contains anti block and slip agent.

### Application

Typical applications for SABIC<sup>®</sup> LLDPE 118WE 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

## TYPICAL PROPERTY VALUES

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
<b>POLYMER PROPERTIES</b>			
<b>Melt Flow Rate</b>			
at 190 °C and 2.16 kg	1.0	dg/min	ISO 1133
<b>Density <sup>(1)</sup></b>	918	kg/m <sup>3</sup>	ASTM D1505
<b>OPTICAL PROPERTIES</b>			
<b>Gloss (45°)</b>	42	%	ASTM D2457
<b>Haze</b>	20	%	ASTM D1003
<b>Clarity</b>	20	mV	SABIC method
<b>FILM PROPERTIES</b>			
<b>Impact strength</b>	22	kJ/m	ASTM D4272
<b>Tear strength TD</b>	120	kN/m	ISO 6383-2
<b>Tear strength MD</b>	40	kN/m	ISO 6383-2
<b>Puncture resistance</b>	380	J/m	SABIC method
<b>Tensile test film</b>			
Strain at break TD	800	%	ISO 527-3
Stress at break TD	30	MPa	ISO 527-3
Yield stress TD	11	MPa	ISO 527-3
Modulus of elasticity MD	160	MPa	ISO 527-3
Modulus of elasticity TD	180	MPa	ISO 527-3
Stress at break MD	37	MPa	ISO 527-3
Strain at break MD	600	%	ISO 527-3
<b>Coefficient of friction</b>	0.1	-	ASTM D1894
<b>Blocking</b>	15	g	SABIC method
<b>Re-blocking</b>	10	g	SABIC method
<b>THERMAL PROPERTIES</b>			
<b>Vicat Softening Temperature</b>			
at 10 N (VST/A)	101	°C	ISO 306
<b>DSC test</b>			
melting point	121	°C	SABIC method

(1) Base resin

## 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.

## QUALITY

SABIC is fully certified in accordance with the internationally accepted quality standard ISO 9001.

## 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 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 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