



# SABIC® LDPE 2100TN00

## Low density polyethylene for Blown film

### Description

SABIC® LDPE 2100TN00 is a grade with excellent toughness and outstanding biaxial shrink properties. The material contains no additives, has a very low energy consumption during processing and has excellent draw down ability.

### Application

SABIC® LDPE 2100TN00 is a heavy duty film grade suitable for applications like shrink hoods, industrial sacks, carrier bags and liners.

### Film properties

Film properties have been measured at 50 µm films with a BUR of 3.

Films have been produced on Kiefel IBC film blown line at 200 kg/h. Die size 200 mm, die gap of 0.8 mm.

### Typical data.

Revision 20060904

Properties	Units SI	Values	Test methods
<b>Polymer properties</b>			
<b>Melt flow rate (MFR)</b> at 190 °C and 2.16 kg	g/10 min	<b>0.3</b>	ISO 1133
<b>Density</b>	kg/m <sup>3</sup>	<b>921</b>	ISO 1183 (A)
<b>Optical properties</b>			
<b>Gloss (45°)</b>	‰	<b>45</b>	ASTM D 2457
<b>Haze</b>	%	<b>12</b>	ASTM D 1003A
<b>Clarity</b>	mV	<b>50</b>	SABIC method
<b>Film properties</b>			
<b>Impact strength</b>	kJ/m	<b>30</b>	ASTM D 4272
<b>Tear strength TD</b>	kN/m	<b>30</b>	ISO 6383-2
<b>Tear strength MD</b>	kN/m	<b>30</b>	ISO 6383-2
<b>Tensile test film</b>			ISO 527-3
Yield stress TD	MPa	<b>11</b>	
Yield stress MD	MPa	<b>11</b>	
Stress at break TD	MPa	<b>23</b>	
Stress at break MD	MPa	<b>28</b>	
Strain at break TD	%	<b>&gt; 500</b>	
Strain at break MD	%	<b>&gt; 200</b>	
Modulus of elasticity TD	MPa	<b>190</b>	
Modulus of elasticity MD	MPa	<b>190</b>	
<b>Coefficient of friction</b>	-	<b>1.0</b>	ASTM D 1894
<b>Blocking</b>	g	<b>20</b>	SABIC method
<b>Re-blocking</b>	g	<b>10</b>	SABIC method
<b>Thermal properties</b>			
<b>Vicat softening temperature</b> at 10 N (VST/A)	°C	<b>93</b>	ISO 306

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### Low density polyethylene for Blown film

**General information.** SABIC Europe produces low density polyethylene by the tubular and the autoclave reactor processes. As a result the product range covers a wide variety of densities and melt flow rates. The LDPE grade slate has a wide variety of slip and anti block additive levels and includes a large numbers of grades with excellent optical properties.

SABIC's CTR® tubular production technology and autoclave production technology guarantees a very low gel level and outstanding draw down ability, low odour and taste levels, which is of advantage for thin film processing and in e.g. food packaging.

**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](http://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.