



## 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.

The product mentioned herein is in particular not tested and therefore not validated for use in pharmaceutical/ medical applications.

#### Typical data.

Revision 20100303

| Properties                                           | Units SI          | Values      | Test methods |              |
|------------------------------------------------------|-------------------|-------------|--------------|--------------|
| <b>Polymer properties</b>                            |                   |             |              |              |
| <b>Melt flow rate (MFR)</b><br>at 190 °C and 2.16 kg | g/10 min          | <b>1.0</b>  | ISO 1133     |              |
| <b>Density</b> <sup>1)</sup>                         | kg/m <sup>3</sup> | <b>918</b>  | ISO 1183 (A) |              |
| <b>Formulation</b>                                   |                   |             |              |              |
| <b>Slip</b>                                          | mg/kg             | <b>1500</b> | SABIC method |              |
| <b>Anti block</b>                                    | mg/kg             | <b>3500</b> | SABIC method |              |
| <b>Anti oxidant</b>                                  | mg/kg             | <b>+</b>    | SABIC method |              |
| <b>Optical properties</b>                            |                   |             |              |              |
| <b>Gloss (45°)</b>                                   | ‰                 | <b>42</b>   | ASTM D 2457  |              |
| <b>Haze</b>                                          | %                 | <b>20</b>   | ASTM D 1003A |              |
| <b>Clarity</b>                                       | mV                | <b>20</b>   | SABIC method |              |
| <b>Film properties</b>                               |                   |             |              |              |
| <b>Impact strength</b>                               | kJ/m              | <b>22</b>   | ASTM D 4272  |              |
| <b>Tear strength TD</b>                              | kN/m              | <b>120</b>  | ISO 6383-2   |              |
| <b>Tear strength MD</b>                              | kN/m              | <b>40</b>   | ISO 6383-2   |              |
| <b>Puncture resistance</b>                           | J/m               | <b>380</b>  | SABIC method |              |
| <b>Tensile test film</b>                             |                   |             |              |              |
| Yield stress TD                                      | MPa               | <b>11</b>   | ISO 527-3    |              |
| Yield stress MD                                      | MPa               | <b>11</b>   |              |              |
| Stress at break TD                                   | MPa               | <b>30</b>   |              |              |
| Stress at break MD                                   | MPa               | <b>37</b>   |              |              |
| Strain at break TD                                   | %                 | <b>800</b>  |              |              |
| Strain at break MD                                   | %                 | <b>600</b>  |              |              |
| Modulus of elasticity TD                             | MPa               | <b>180</b>  |              |              |
| Modulus of elasticity MD                             | MPa               | <b>160</b>  |              |              |
| <b>Coefficient of friction</b>                       | -                 | <b>0.1</b>  |              | ISO 8295     |
| <b>Blocking</b>                                      | g                 | <b>15</b>   |              | SABIC method |
| <b>Re-blocking</b>                                   | g                 | <b>10</b>   | SABIC method |              |
| <b>Thermal properties</b>                            |                   |             |              |              |

<sup>1)</sup> Base resin



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|                                                       |    |            |              |
|-------------------------------------------------------|----|------------|--------------|
| <b>Vicat softening temperature</b><br>at 10 N (VST/A) | °C | <b>101</b> | ISO 306/B    |
| <b>DSC test</b><br>melting point                      | °C | <b>121</b> | 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](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.

**Disclaimer.** The information contained herein may include typical properties of our products or their typical performances when used in certain typical applications. Actual properties of our products, in particular when used in conjunction with any third party material(s) or for any non-typical applications, may differ from typical properties.

It is the customer's responsibility to inspect and test our product(s) in order to satisfy itself as to the suitability of the product(s) for its and its customers particular purposes. The customer is responsible for the appropriate, safe and legal use, processing and handling of all product(s) purchased from us.

Nothing herein is intended to be nor shall it constitute a warranty whatsoever, in particular, warranty of merchantability or fitness for a particular purpose.

SABIC Europe as referred to herein means any legal entity belonging to the SABIC Europe group of companies.