# SABIC® LLDPE 218BJ

LINEAR LOW DENSITY POLYETHYLENE
REGION ASIA

## DESCRIPTION

SABIC® LLDPE 218BJ is a butene linear low density polyethylene resin with an additive package typically designed for a broader range of food applications (TNPP free). The good thermal stability allows to use the resin in critical extrusion processing conditions. Films produced from SABIC® LLDPE 218BJ have better draw-down ability compared to lower MFR LLDPE resins. This product is not intended for and must not be used in any pharmaceutical/medical applications.

## TYPICAL APPLICATIONS

SABIC® LLDPE 218BJ is typically used for food applications (lamination film, barrier film), melt embossed films, but can also be used in industrial packaging such as cling film and stretch film for manual and pallet wrap. It can also be used as a blending partner with other SABIC® PE resins in general-purpose blown and cast film applications.

## TYPICAL PROPERTY VALUES

Revision 20210924

| PROPERTIES | TYPICAL VALUES | UNITS | TEST METHODS |
|---|---|---|---|
| **POLYMER PROPERTIES** | | | |
| **Melt Flow Rate (MFR)** | | | |
| at 190 °C and 2.16 kg | 2 | g/10 min | ASTM D1238 |
| **Density** | 918 | kg/m³ | ASTM D1505 |
| **MECHANICAL PROPERTIES** | | | |
| **Dart Impact Strength** [1] | 110 | g/µm | ASTM D1709 |
| **OPTICAL PROPERTIES** [1] | | | |
| **Haze** | 7 | % | ASTM D1003 |
| **Gloss** | | | |
| at 60 °C | 80 | - | ASTM D2457 |
| **FILM PROPERTIES** [1] | | | |
| **Tensile Properties** | | | |
| stress at break, MD | 31 | MPa | ASTM D882 |
| stress at break, TD | 22 | MPa | ASTM D882 |
| strain at break, MD | 550 | % | ASTM D882 |
| strain at break, TD | 670 | % | ASTM D882 |
| stress at yield, MD | 12 | MPa | ASTM D882 |
| stress at yield, TD | 10 | MPa | ASTM D882 |
| 1% secant modulus, MD | 200 | MPa | ASTM D882 |
| 1% secant modulus, TD | 240 | MPa | ASTM D882 |
| **Puncture resistance** | 60 | J/m | SABIC method |
| **Elmendorf Tear Strength** | | | |
| MD | 135 | g | ASTM D1922 |
| TD | 400 | g | ASTM D1922 |
| **THERMAL PROPERTIES** | | | |
| **Vicat Softening Temperature** | 98 | °C | ASTM D1525 |

(1) Properties have been measured by producing 30 µm film with 2.5 BUR using 100% 218BJ.

## PROCESSING CONDITIONS

Typical processing conditions for 218BJ are:

Melt temperature: 250 - 300°C

Chill roll temperature: 20°C

## 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.

## 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 do not 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.

## DISCLAIMER