

SABIC® LLDPE 222NJ

LINEAR LOW DENSITY POLYETHYLENE

DESCRIPTION

SABIC® LLDPE 222NJ is a linear low density polyethylene resin intended for cast film applications. This resin has good flow characteristics for easy processing. Films made from this resin exhibit excellent transparency, and good toughness properties. LLDPE 222NJ contains no slip agent or Anti-Block.

TYPICAL APPLICATIONS

- Hand and pallet stretch wrap film
- Wire & Cable

TYPICAL PROPERTY VALUES

Revision 20220616

| PROPERTIES | TYPICAL VALUES | UNITS | TEST METHODS |
|--|----------------|-------------------|--------------|
| POLYMER PROPERTIES | | | |
| Melt Flow Rate (MFR) | | | |
| at 190 °C and 2.16 kg | 2.2 | g/10 min | ASTM D1238 |
| Density | | | |
| Density | 0.921 | g/cm ³ | ASTM D792 |
| OPTICAL PROPERTIES ⁽¹⁾ | | | |
| Gloss | | | |
| Gloss (45°) | 150 | - | ASTM D2457 |
| Haze ⁽¹⁾ | 0.7 | % | ASTM D1003 |
| FILM PROPERTIES ⁽¹⁾ | | | |
| Dart Impact Strength | | | |
| Dart Drop Impact | 65 | g | ASTM D1709 |
| Elmendorf Tear Strength | | | |
| Tear Strength, MD | 70 | g | ASTM D1922 |
| Tear Strength, TD | 215 | g | ASTM D1922 |
| Tensile test film | | | |
| 1% secant modulus, MD | 160 | MPa | ASTM D882 |
| 1% secant modulus, TD | 155 | MPa | ASTM D882 |
| Stress @ Break, MD | 40 | MPa | ASTM D882 |
| Stress @ Break, TD | 30 | MPa | ASTM D882 |
| Strain @ Break, MD | 670 | % | ASTM D882 |
| Strain @ Break, TD | 850 | % | ASTM D882 |
| THERMAL PROPERTIES | | | |
| Melting Point | 122 | °C | SABIC method |

(1) Cast film processing conditions: Extruder Ø55 mm, Die width 600 mm, Die lip gap 1.2 mm, Die temperature 280 °C, Chill roll temperature 30 °C, Output rate 50 kg/h, Take-up speed 75 m/min, Film thickness 20 µm.

PROCESSING CONDITIONS

Typical processing conditions: 180 - 220 °C

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.

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.

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