

SABIC® HDPE FJ01552

HIGH DENSITY POLYETHYLENE

DESCRIPTION

SABIC® HDPE FJ01552 is a TNPP free grade. It is a medium molecular weight High Density Polyethylene designed for blown film extrusion. It has a broad molecular weight with excellent extrudability. The design of the product, molecular architecture and density, gives it a unique combination of easy extrusion and strong physical properties which makes it suitable for producing thin films with excellent strength and rigidity.

TYPICAL APPLICATIONS

SABIC® HDPE FJ01552 resin is recommended for the production of strong millinery and notion bags, deep freeze bags, table cloths and thin film as quality replacement for paper products.

TYPICAL PROPERTY VALUES

Revision 20230421

| PROPERTIES | TYPICAL VALUES | UNITS | TEST METHODS |
|--|----------------|-------------------|--------------|
| POLYMER PROPERTIES | | | |
| Melt Flow Rate (MFR) | | | |
| at 190 °C and 2.16 kg | 0.15 | g/10 min | ISO 1133 |
| at 190 °C and 21.6 kg | 16 | g/10 min | ISO 1133 |
| Density | 952 | kg/m ³ | ASTM D1505 |
| FILM PROPERTIES | | | |
| Tensile Properties ⁽¹⁾ | | | |
| stress at break, MD | 55 | MPa | ASTM D882 |
| stress at break, TD | 49 | MPa | ASTM D882 |
| strain at break, MD | 400 | % | ASTM D882 |
| strain at break, TD | 610 | % | ASTM D882 |
| stress at yield, MD | 31 | MPa | ASTM D882 |
| stress at yield, TD | 30 | MPa | ASTM D882 |
| 1% secant modulus, MD | 1400 | MPa | ASTM D882 |
| 1% secant modulus, TD | 1700 | MPa | ASTM D882 |
| Elmendorf Tear Strength | | | |
| MD | 4 | g | ASTM D1922 |
| TD | 40 | g | ASTM D1922 |
| Dart Impact Strength | | | |
| F50 | 180 | g | ASTM D1709 |
| THERMAL PROPERTIES | | | |
| Vicat Softening Temperature | 125 | °C | ASTM D1525 |

(1) Properties are based on 15 µm film produced at a BUR of 4 using 100% FJ01552.

PROCESSING CONDITIONS

SABIC® HDPE FJ0155 can be extruded on conventional HMW-HDPE equipment at melt temperatures between 200 and 235°C.

Other typical processing conditions:

Frost line Height: 6-8 times die Ø

BUR: 3-5

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 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.

DISCLAIMER

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