

# 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

| PROPERTIES                               | TYPICAL VALUES | UNITS             | TEST METHODS |
|--|----------------|-------------------|--------------|
| <b>POLYMER PROPERTIES</b>                |                |                   |              |
| <b>Melt Flow Rate (MFR)</b>              |                |                   |              |
| 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     |
| <b>Density</b>                           | 952            | kg/m <sup>3</sup> | ASTM D1505   |
| <b>FILM PROPERTIES</b>                   |                |                   |              |
| <b>Tensile Properties <sup>(1)</sup></b> |                |                   |              |
| 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    |
| <b>Elmendorf Tear Strength</b>           |                |                   |              |
| MD                                       | 4              | g                 | ASTM D1922   |
| TD                                       | 40             | g                 | ASTM D1922   |
| <b>Dart Impact Strength</b>              |                |                   |              |
| F50                                      | 180            | g                 | ASTM D1709   |
| <b>THERMAL PROPERTIES</b>                |                |                   |              |
| <b>Vicat Softening Temperature</b>       | 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