

# SABIC® HDPE BM1052J

HIGH DENSITY POLYETHYLENE

## DESCRIPTION

BM1052J is a high molecular weight TNPP free High Density Polyethylene copolymer grade with broad molecular weight distribution. It has excellent process ability and exhibits very high impact strength, stiffness and superior environmental stress crack resistance.

## TYPICAL APPLICATIONS

BM1052J resin is intended for blow molding of large containers such as closed head shipping containers and containers for industrial use. It can also be extruded into sheets giving exceptionally high impact strength.

## TYPICAL PROPERTY VALUES

| PROPERTIES                                    | TYPICAL VALUES | UNITS             | TEST METHODS |
|---|----------------|-------------------|--------------|
| <b>POLYMER PROPERTIES <sup>(1)</sup></b>      |                |                   |              |
| <b>Melt Flow Rate (MFR)</b>                   |                |                   |              |
| @ 190°C & 21.6 kg                             | 10             | g/10 min          | ASTM D1238   |
| @ 190°C and 5 kg                              | 0.38           | g/10 min          | ASTM D1238   |
| <b>Density</b>                                |                |                   |              |
| @ 23°C  | 952            | kg/m <sup>3</sup> | ASTM D1505   |
| <b>MECHANICAL PROPERTIES <sup>(2)</sup></b>   |                |                   |              |
| <b>1% Secant Modulus</b>                      | 1200           | MPa               | ASTM D638    |
| <b>Tensile strength</b>                       |                |                   |              |
| @ Yield                                       | 28             | MPa               | ASTM D638    |
| @ Break                                       | 14             | MPa               | ASTM D638    |
| <b>Tensile Elongation at Break</b>            | >500           | %                 | ASTM D638    |
| <b>Flexural Strength</b>                      | 27             | MPa               | ASTM D790    |
| <b>Flexural Modulus</b>                       | 905            | MPa               | ASTM D790    |
| <b>Izod Impact Strength</b>                   | 270            | J/m               | ASTM D256    |
| <b>Hardness (Shore D)</b>                     | 58             | -                 | ASTM D2240   |
| <b>ESCR (100% Igepal), F50 <sup>(3)</sup></b> | >500           | Hrs               | ASTM D1693B  |
| <b>THERMAL PROPERTIES <sup>(1)</sup></b>      |                |                   |              |
| <b>Vicat Softening Point</b>                  | 127            | °C                | ASTM D1525   |
| <b>Brittleness Temperature</b>                | <-75           | °C                | ASTM D746    |

(1) Typical values: not to be construed as specification limits.

(2) Based on compression molded sheet

(3) Based on compression molded sheet

## PROCESSING CONDITIONS

Typical processing conditions for BM1052J are:

Barrel temperature: 200-250°C (390-480°F) Mold temperature: 15-60°C (60-140°F)