



# SABIC® LDPE P223

LOW DENSITY POLYETHYLENE FOR PIPES

## DESCRIPTION

P223 is a natural low density polyethylene (LDPE) resin, designed for non-pressure pipe extrusion application.

## TYPICAL APPLICATIONS

The grade is designed to be used as blend with HDPE for Non-Pressure pipe applications such as irrigation, cable conduits, corrugated & gravity pipe segments.

## TYPICAL PROPERTY VALUES

| PROPERTIES                                  | TYPICAL VALUES | UNITS             | TEST METHODS |
|---|----------------|-------------------|--------------|
| <b>POLYMER PROPERTIES <sup>(1)</sup></b>    |                |                   |              |
| <b>Melt Flow Rate (MFR)</b>                 |                |                   |              |
| @ 190°C & 2.16kg load                       | 2              | g/10 min          | ASTM D1238   |
| @ 190°C & 5 kg load                         | 7.1            | g/10 min          | ASTM D1238   |
| <b>Density</b>                              |                |                   |              |
| Density at 23°C                             | 923            | kg/m <sup>3</sup> | ASTM D792    |
| <b>MECHANICAL PROPERTIES <sup>(1)</sup></b> |                |                   |              |
| <b>Tensile strength</b>                     |                |                   |              |
| Tensile @ Yield <sup>(2)</sup>              | 10             | MPa               | ASTM D638    |
| Tensile @ Break                             | 12.7           | MPa               | ASTM D638    |
| Elongation @ Yield                          | 11.4           | %                 | ASTM D638    |
| Elongation @ Break                          | 87.4           | %                 | ASTM D638    |
| Tensile Modulus                             | 324.4          | MPa               | ASTM D638    |
| Flexural Modulus                            | 155.2          | MPa               | ASTM D790    |
| <b>Hardness</b>                             |                |                   |              |
| Hardness (shore D) <sup>(3)</sup>           | 42.8           | -                 | ASTM D2240   |
| <b>THERMAL PROPERTIES</b>                   |                |                   |              |
| <b>Vicat Softening Temperature</b>          |                |                   |              |
| Vicat                                       | 94.5           | °C                | ASTM D1525   |

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

(2) Test specimen, thickness 3.2 mm with 50mm/min test speed

(3) Based on injection molded sheet