

# SABIC® HDPE B5202

High Density Polyethylene

Saudi Basic Industries Corporation (SABIC)

Message:

SABIC® HDPE B5202 is a material with a high molecular mass, supplied as pellets.  
This product is not intended for and must not be used in any pharmaceutical/medical applications.

| General Information                                                                      |                       |                   |                  |
|------------------------------------------------------------------------------------------|-----------------------|-------------------|------------------|
| Features                                                                                 | High Density          |                   |                  |
|                                                                                          | High Molecular Weight |                   |                  |
| Forms                                                                                    | Pellets               |                   |                  |
| Processing Method                                                                        | Blow Molding          |                   |                  |
| Physical                                                                                 | Nominal Value         | Unit              | Test Method      |
| Density                                                                                  | 0.952                 | g/cm <sup>3</sup> | ISO 1183         |
| Melt Mass-Flow Rate (MFR)                                                                |                       |                   | ISO 1133         |
| 190°C/21.6 kg                                                                            | 2.0                   | g/10 min          |                  |
| 190°C/5.0 kg                                                                             | < 0.10                | g/10 min          |                  |
| Environmental Stress-Cracking Resistance<br>(10% Igepal CO-630, Compression Molded, F50) | 120                   | hr                | ASTM D1693B      |
| Hardness                                                                                 | Nominal Value         | Unit              | Test Method      |
| Shore Hardness (Shore D, Compression Molded)                                             | 61                    |                   | ISO 868          |
| Mechanical                                                                               | Nominal Value         | Unit              | Test Method      |
| Tensile Modulus (2.00 mm, Compression Molded)                                            | 1000                  | MPa               | ISO 527-2/1BA/50 |
| Tensile Stress                                                                           |                       |                   | ISO 527-2/1BA/50 |
| Yield, 2.00 mm, Compression Molded                                                       | 25.0                  | MPa               |                  |
| Break, 2.00 mm, Compression Molded                                                       | 31.0                  | MPa               |                  |
| Tensile Strain (Break, 2.00 mm, Compression Molded)                                      | > 1000                | %                 | ISO 527-2/1BA/50 |
| Flexural Modulus (2.00 mm, Compression Molded)                                           | 1150                  | MPa               | ISO 178          |
| Flexural Stress (2.00 mm, Compression Molded)                                            | 26.0                  | MPa               | ISO 178          |
| ESCR (Strain Hardening) - Gp                                                             | 21.0                  | MPa               | Internal Method  |
| Enthalpy Change                                                                          | 200                   | J/g               | ISO 11357-3      |
| Impact                                                                                   | Nominal Value         | Unit              | Test Method      |
| Notched Izod Impact Strength                                                             |                       |                   | ISO 180/A        |
| -30°C, Compression Molded                                                                | 36                    | kJ/m <sup>2</sup> |                  |
| 23°C, Compression Molded                                                                 | 52                    | kJ/m <sup>2</sup> |                  |
| Thermal                                                                                  | Nominal Value         | Unit              | Test Method      |

|                                                    |      |    |             |
|----------------------------------------------------|------|----|-------------|
| Heat Deflection Temperature (0.45 MPa, Unannealed) | 79.0 | °C | ISO 75-2/B  |
| Vicat Softening Temperature                        | 127  | °C | ISO 306/A   |
| Melting Temperature (DSC)                          | 132  | °C | ISO 11357-3 |

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