

# SABIC® HDPE B5210

High Density Polyethylene

Saudi Basic Industries Corporation (SABIC)

## Message:

SABIC® HDPE B5210 is a material with a specific molecular weight distribution, typically used for blow moulding of light weight UN certified cans from 2 to 20 litres.

This product is not intended for and must not be used in any pharmaceutical/medical applications.

| General Information                                                                         |               |                   |                  |
|---------------------------------------------------------------------------------------------|---------------|-------------------|------------------|
| Features                                                                                    | High Density  |                   |                  |
| Uses                                                                                        | Containers    |                   |                  |
| 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/2.16 kg                                                                               | < 0.10        | g/10 min          |                  |
| 190°C/21.6 kg                                                                               | 9.0           | g/10 min          |                  |
| 190°C/5.0 kg                                                                                | 0.35          | g/10 min          |                  |
| Environmental Stress-Cracking Resistance<br>(10% Igepal CO-630, Compression<br>Molded, F50) | 200           | hr                | ASTM D1693B      |
| Hardness                                                                                    | Nominal Value | Unit              | Test Method      |
| Shore Hardness (Shore D, Compression<br>Molded)                                             | 61            |                   | ISO 868          |
| Mechanical                                                                                  | Nominal Value | Unit              | Test Method      |
| Tensile Modulus (2.00 mm, Compression<br>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                                                          | 37.0          | MPa               |                  |
| Tensile Strain (Break, 2.00 mm,<br>Compression Molded)                                      | > 1000        | %                 | ISO 527-2/1BA/50 |
| Flexural Modulus (2.00 mm, Compression<br>Molded)                                           | 1150          | MPa               | ISO 178          |
| Flexural Stress (2.00 mm, Compression<br>Molded)                                            | 26.0          | MPa               | ISO 178          |
| ESCR (Strain Hardening) - Gp                                                                | 23.0          | 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                                                                   | 15            | kJ/m <sup>2</sup> |                  |
| 23°C, Compression Molded                                                                    | 18            | 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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