

SABIC® HDPE B5823

High Density Polyethylene

Saudi Basic Industries Corporation (SABIC)

Message:

SABIC® HDPE B5823 is typically used for blow moulding of consumer packaging up to 5 l, combining high stiffness and a good ESCR level. This grade is typically used for packaging the majority of household and industrial chemicals, such as detergents, cleaners, shampoos and cosmetics, as well as food packaging.
This product is not intended for and must not be used in any pharmaceutical/medical applications.

| General Information | | | |
|--|----------------------------------|-------------------|------------------|
| Features | High Density | | |
| | High ESCR (Stress Crack Resist.) | | |
| | High Stiffness | | |
| Uses | Cosmetic Packaging | | |
| | Food Packaging | | |
| | Packaging | | |
| | Piping | | |
| | Sheet | | |
| Processing Method | Blow Molding | | |
| | Extrusion | | |
| | Pipe Extrusion | | |
| | Sheet Extrusion | | |
| Physical | Nominal Value | Unit | Test Method |
| Density | 0.958 | g/cm ³ | ISO 1183 |
| Melt Mass-Flow Rate (MFR) | | | ISO 1133 |
| 190°C/2.16 kg | 0.16 | g/10 min | |
| 190°C/21.6 kg | 23 | g/10 min | |
| 190°C/5.0 kg | 0.89 | g/10 min | |
| Environmental Stress-Cracking Resistance (10% Igepal CO-630, Compression Molded, F50) | 45.0 | hr | ASTM D1693B |
| Hardness | Nominal Value | Unit | Test Method |
| Shore Hardness (Shore D, Compression Molded) | 63 | | ISO 868 |
| Mechanical | Nominal Value | Unit | Test Method |
| Tensile Modulus (2.00 mm, Compression Molded) | 1150 | MPa | ISO 527-2/1BA/50 |
| Tensile Stress | | | ISO 527-2/1BA/50 |
| Yield, 2.00 mm, Compression Molded | 28.0 | MPa | |

| | | | |
|---|---------------|-------------------|------------------|
| Break, 2.00 mm, Compression Molded | 22.0 | MPa | |
| Tensile Strain (Break, 2.00 mm, Compression Molded) | > 1000 | % | ISO 527-2/1BA/50 |
| Flexural Modulus (2.00 mm, Compression Molded) | 1400 | MPa | ISO 178 |
| Flexural Stress (2.00 mm, Compression Molded) | 29.0 | MPa | ISO 178 |
| Impact | Nominal Value | Unit | Test Method |
| Notched Izod Impact Strength | | | ISO 180/A |
| -30°C, Compression Molded | 6.0 | kJ/m ² | |
| 23°C, Compression Molded | 12 | kJ/m ² | |
| Thermal | Nominal Value | Unit | Test Method |
| Heat Deflection Temperature (0.45 MPa, Unannealed) | 85.0 | °C | ISO 75-2/B |
| Vicat Softening Temperature | 128 | °C | ISO 306/A |
| Melting Temperature (DSC) | 133 | °C | ISO 11357-3 |
| Enthalpy Change | 215 | J/g | ISO 11357-3 |

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