

SABIC® HDPE B5411

HIGH DENSITY POLYETHYLENE

DESCRIPTION

SABIC® HDPE B5411 is a material with a semi-high molecular mass, additionally thermal stabilized and typically used for blow molding and sheet extrusion. This grade is combining stiffness, toughness with an high ESCR and is typically used for large bottles, cans, technical parts and toys.

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

TYPICAL PROPERTY VALUES

| PROPERTIES | TYPICAL VALUES | UNITS | TEST METHODS |
|--|----------------|-------------------|--------------|
| POLYMER PROPERTIES | | | |
| Melt Flow Rate (MFR) | | | |
| at 190 °C and 5 kg | 0.40 | dg/min | ISO 1133 |
| at 190 °C and 21.6 kg | 11 | dg/min | ISO 1133 |
| Density⁽¹⁾ | 954 | kg/m ³ | ISO 1183 |
| MECHANICAL PROPERTIES^{(1) (2)} | | | |
| Tensile test^{(3) (4)} | | | |
| stress at yield | 26 | MPa | ISO 527-2 |
| stress at break | 30 | MPa | ISO 527-2 |
| strain at break | 1000 | % | ISO 527-2 |
| tensile modulus | 1050 | MPa | ISO 527-2 |
| Flexural test | | | |
| Flexural modulus | 1250 | MPa | ISO 178 |
| Flexural strength | 27 | MPa | ISO 178 |
| Izod impact notched | | | |
| at 23 °C | 16 | kJ/m ² | ISO 180/A |
| at -30 °C | 14 | kJ/m ² | ISO 180/A |
| Hardness Shore D | 61 | - | ISO 868 |
| ESCR (10% Igepal CO-630), F50 | 55 | h | ASTM D1693B |
| THERMAL PROPERTIES | | | |
| Heat deflection temperature^{(1) (2)} | | | |
| at 0.45 MPa (HDT/B) | 81 | °C | ISO 75-2 |
| Vicat Softening Temperature^{(1) (2)} | | | |
| at 10 N (VST/A) | 127 | °C | ISO 306 |
| DSC test | | | |
| melting point | 132 | °C | ISO 11357-3 |
| enthalpy change | 205 | J/g | ISO 11357-3 |