

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

(1) Compression moulding of test specimen according to ISO 1872-2

(2) Conditioning of test specimen: temp. 23 °C, relative humidity 50 %, 24 hours

(3) Test specimen according to ISO 527-2 type 1BA, thickness 2 mm

(4) Speed of testing: 50 mm/min