

# SABIC® HDPE B5823

## HIGH DENSITY POLYETHYLENE

### DESCRIPTION

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.

### TYPICAL PROPERTY VALUES

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
<b>POLYMER PROPERTIES</b>			
<b>Melt Flow Rate (MFR)</b>			
at 190 °C and 2.16 kg	0.16	dg/min	ISO 1133
at 190 °C and 5 kg	0.89	dg/min	ISO 1133
at 190 °C and 21.6 kg	23	dg/min	ISO 1133
<b>Density <sup>(1)</sup></b>	958	kg/m <sup>3</sup>	ISO 1183
<b>MECHANICAL PROPERTIES <sup>(1) (2)</sup></b>			
<b>Tensile test <sup>(3) (4)</sup></b>			
stress at yield	28	MPa	ISO 527-2
stress at break	22	MPa	ISO 527-2
strain at break	1000	%	ISO 527-2
tensile modulus	1150	MPa	ISO 527-2
<b>Flexural test</b>			
Flexural modulus	1400	MPa	ISO 178
Flexural strength	29	MPa	ISO 178
<b>Izod impact notched</b>			
at 23 °C	12	kJ/m <sup>2</sup>	ISO 180/A
at -30 °C	6	kJ/m <sup>2</sup>	ISO 180/A
<b>Hardness Shore D</b>	63	-	ISO 868
<b>ESCR (10% Igepal CO-630), F50</b>	45	h	ASTM D1693B
<b>THERMAL PROPERTIES</b>			
<b>Heat deflection temperature <sup>(1) (2)</sup></b>			
at 0.45 MPa (HDT/B)	85	°C	ISO 75-2
<b>Vicat Softening Temperature <sup>(1) (2)</sup></b>			
at 10 N (VST/A)	128	°C	ISO 306
<b>DSC test</b>			
melting point	133	°C	ISO 11357-3
enthalpy change	215	°C	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) Speed of testing: 50 mm/min

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