

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