

SABIC® HDPE B5421

HIGH DENSITY POLYETHYLENE

DESCRIPTION

SABIC® HDPE B5421 is typically used for blow molding consumer packaging up to 5 l, combining a good stiffness with an high ESCR. This grade is typically used for packaging detergents, cleaners, shampoos and cosmetics at a high ESCR demand.

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 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	20	dg/min	ISO 1133
Density ⁽¹⁾	954	kg/m³	ISO 1183
MECHANICAL PROPERTIES			
Tensile test ^{(2) (3)}			
stress at yield	26	MPa	ISO 527-2
stress at break	27	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	14	kJ/m²	ISO 180/A
at -30 °C	6	kJ/m²	ISO 180/A
Hardness Shore D	61	-	ISO 868
ESCR (10% Igepal CO-630), F50	50	h	ASTM D1693B
THERMAL PROPERTIES			
Heat deflection temperature ^{(1) (4)}			
at 0.45 MPa (HDT/B)	81	°C	ISO 75-2
Vicat Softening Temperature ^{(1) (4)}			
at 10 N (VST/A)	127	°C	ISO 306
DSC test			
melting point	135	°C	ISO 11357-3
enthalpy change	205	J/g	ISO 11357-3

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

(2) Speed of testing: 50 mm/min

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

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