

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

Revision 20170531

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
POLYMER PROPERTIES			
Melt Flow Rate			
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) (2) (3) (4)	954	kg/m ³	ISO 1183
MECHANICAL PROPERTIES (7) (1) (2) (3) (8) (4)			
Tensile test (5) (6)			
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/m ²	ISO 180/A
at -30 °C	6	kJ/m ²	ISO 180/A
Hardness Shore D	61	-	ISO 868
ESCR (10% Igepal CO-630), F50	50	h	ASTM D1693B
THERMAL PROPERTIES			
Heat deflection temperature (7) (2) (3) (8)			
at 0.45 MPa (HDT/B)	81	°C	ISO 75-2
Vicat Softening Temperature (7) (2) (3) (8)			
at 10 N (VST/A)	127	°C	ISO 306
DSC test			
melting point	135	°C	ISO 11357-3

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
enthalpy change	205	J/g	ISO 11357-3

- (1) Compression moulding of test specimen according to ISO 1872-2
- (2) Compression moulding of test specimen according to ISO 1872-2
- (3) Compression moulding of test specimen according to ISO 1872-2
- (4) Compression moulding of test specimen according to ISO 1872-2
- (5) Speed of testing: 50 mm/min
- (6) Test specimen according to ISO 527-2 type 1BA, thickness 2 mm
- (7) Conditioning of test specimen: temp. 23 °C, relative humidity 50 %, 24 hours
- (8) Conditioning of test specimen: temp. 23 °C, relative humidity 50 %, 24 hours

DISCLAIMER

The information contained herein may include typical properties of our products or their typical performances when used in certain typical applications. Actual properties of our products, in particular when used in conjunction with any third party material(s) or for any non-typical applications, may differ from typical properties.

It is the customer's responsibility to inspect and test our product(s) in order to satisfy itself as to the suitability of the product(s) for its and its customers particular purposes. The customer is responsible for the appropriate, safe and legal use, processing and handling of all product(s) purchased from us.

Nothing herein is intended to be nor shall it constitute a warranty whatsoever, in particular, warranty of merchantability or fitness for a particular purpose.

SABIC as referred to herein means any legal entity belonging to the group of companies headed by Saudi Arabia Basic Industries Corporation.