SABIC® HDPE B5823

High density polyethylene for Blow moulding

Description.

SABIC® HDPE B5823 is developed for blow moulding consumer packaging up to 5 l, combining high stiffness and a good ESCR level. This grade is suitable for packaging the majority of detergents, cleaners, shampoos and cosmetics.

Typical data. Revision 20051216

Properties		Units SI	Values	Test methods
Polymer properties				
Melt flow rate (MFR)				ISO 1133
at 190 °C and 2.16 kg		g/10 min	**0.16**	
at 190 °C and 5 kg		g/10 min	**0.89**	
at 190 °C and 21.6 kg		g/10 min	**23**	
Density	1)	kg/m³	**958**	ISO 1183
Mechanical properties	1) 2)			
Tensile test	3) 4)			ISO 527-2
stress at yield		MPa	**28**	
stress at break		MPa	**22**	
strain at break		%	**> 1000**	
tensile modulus		MPa	**1150**	
Izod impact notched				ISO 180/A
at 23 °C		kJ/m²	**12**	
at -30 °C		kJ/m²	**6**	
Hardness Shore D		-	**63**	ISO 868
ESCR	5)	h	**13**	SABIC method
Thermal properties				
Heat deflection temperature	1) 2)			ISO 75-2
at 0.45 MPa (HDT/B)		°C	**85**	
Vicat softening temperature	1) 2)			ISO 306
at 10 N (VST/A)		°C	**128**	
DSC test				DIN 53765
melting point		°C	**133**	
enthalpy change		J/g	**215**	

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
5) Determined in Rhodacal-DS10 at 75 °C, 3 MPa, thickness 1 mm

internet www.SABIC-europe.com
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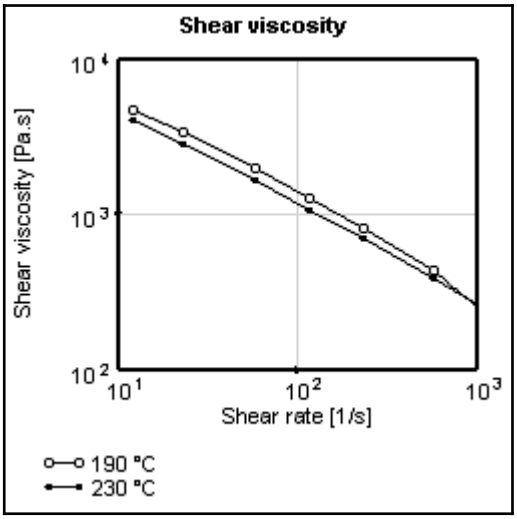

General information. The SABIC® HDPE product range for blow moulding and extrusion is produced in a slurry – or gasphase process using a Cr catalyst. The primary characteristic of SABIC® HDPE grades is a broad molecular weight distribution, which ensures excellent behaviour during extrusion.
Additional characteristics are a high purity, excellent stability during processing and a high intrinsic toughness. The carefully balance of environmental stress crack resistance and stiffness is becoming visible on grade level.
Typical application area: bottles, cans, containers and technical articles, sheet and thermoforming, profiles and tubes for pressure less applications.

Health, Safety and Food Contact regulations. Detailed information is provided in the relevant Material Safety Datasheet and or Standard Food Declaration, available on the Internet (www.SABIC-europe.com). Additional specific information can be requested via your local Sales Office.

Quality. SABIC Europe is fully certified in accordance with the internationally accepted quality standard ISO 9001-2000. It is SABIC Europe's policy to supply materials that meet customers specifications and needs and to keep up its reputation as a pre-eminent, reliable supplier of e.g. polyethylenes.

Storage and handling. Polyethylenes resins (in pelletised or powder form) should be stored in such a way that it prevents exposure to direct sunlight and/or heat, as this may lead to quality deterioration. The storage location should also be dry, dust free and the ambient temperature should not exceed 50 °C. Not complying with these precautionary measures can lead to a degradation of the product which can result in colour changes, bad smell and inadequate product performance. It is also advisable to process polyethylene resins (in pelletised or powder form) within 6 months after delivery, this because also excessive aging of polyethylene can lead to a deterioration in quality.

Environment and recycling. The environmental aspects of any packaging material do not only imply waste issues but have to be considered in relation with the use of natural resources, the preservations of foodstuffs, etc. SABIC Europe considers polyethylene to be an environmentally efficient packaging material. Its low specific energy consumption and insignificant emissions to air and water designate polyethylene as the ecological alternative in comparison with the traditional packaging materials. Recycling of packaging materials is supported by SABIC Europe whenever ecological and social benefits are achieved and where a social infrastructure for selective collecting and sorting of packaging is fostered. Whenever 'thermal' recycling of packaging (i.e. incineration with energy recovery) is carried out, polyethylene -with its fairly simple molecular structure and low amount of additives- is considered to be a trouble-free fuel.

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