SABIC® HDPE F04660

High density polyethylene for Blown film

Description

SABIC® HDPE F04660 is a homopolymer film grade with excellent processability and high stiffness. It has good moisture barrier properties and can be blended with LDPE and LLDPE to improve film strength and rigidity.

Application

SABIC® HDPE F04660 is recommended for applications where high stiffness is required. It can be used in the middle layer in a coex structure or blended with LDPE and LLDPE to increase stiffness and mechanical properties. It has excellent water vapor barrier properties required for certain food packaging.

Processing conditions

SABIC® HDPE F04660 can be extruded at melt temperaures between 200 and 235 °C.

Film properties

Film properties have been measured on 25 µm blown film with a BUR of 2.5.

Typical data. Revision 20081029

Properties	Units SI	Values	Test methods
Polymer properties			
Melt flow rate (MFR)			ASTM D 1238
at 190 °C and 2.16 kg	g/10 min	**0.7**	
at 190 °C and 21.6 kg	g/10 min	**46**	
Density	kg/m³	**961**	ASTM D 1505
Film properties			
Dart Impact F50	g	**<20**	ASTM D 1709
Tear strength TD Elmendorf	g	**800**	ASTM D 1922
Tear strength MD Elmendorf	g	**10**	ASTM D 1922
Tensile test film			ASTM D 882
Stress at break TD	MPa	**37**	
Stress at break MD	MPa	**67**	
Strain at break TD	%	**3**	
Strain at break MD	%	**490**	
Modulus of elasticity TD	MPa	**1700**	
Modulus of elasticity MD	MPa	**1250**	
Thermal properties			
Vicat softening temperature	°C	**129**	ASTM D 1525

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General information. SABIC® HDPE copolymer film grades offer, as a result of their relative wide molecular weight distribution a well balanced combination of processing properties, draw down and film properties such as: toughness. impact resistance, stiffness and sealabillity.

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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