

SABIC® HDPE F04660

HIGH DENSITY POLYETHYLENE
REGION ASIA

DESCRIPTION

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

This product is not intended for and must not be used in any pharmaceutical/medical applications.

TYPICAL APPLICATIONS

SABIC® HDPE F04660 is typically used 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 good water vapor barrier properties required for certain food packaging.

TYPICAL PROPERTY VALUES

Revision 20260313

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
POLYMER PROPERTIES			
Melt Flow Rate (MFR)			
at 190°C and 2.16 kg	0.7	g/10 min	ASTM D1238
at 190°C and 21.6 kg	46	g/10 min	ASTM D1238
Density			
at 23°C	961	kg/m³	ASTM D1505
FILM PROPERTIES ⁽¹⁾			
Tensile Properties			
stress at break, MD	67	MPa	ASTM D882
stress at break, TD	37	MPa	ASTM D882
strain at break, MD	490	%	ASTM D882
strain at break, TD	3	%	ASTM D882
1% secant modulus, MD	1250	MPa	ASTM D882
1% secant modulus, TD	1700	MPa	ASTM D882
Elmendorf Tear Strength			
MD	10	g	ASTM D1922
TD	800	g	ASTM D1922
Dart Impact Strength			
F50	<20	g	ASTM D1709
THERMAL PROPERTIES			
Vicat Softening Temperature	129	°C	ASTM D1525

(1) Properties are based on 25 µm film produced at 2.5:1 BUR using 100% F04660.

PROCESSING CONDITIONS

SABIC® HDPE F04660 can be extruded at melt temperatures between 190 and 220 °C.

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CHEMISTRY THAT MATTERS™



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.

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.

DISCLAIMER

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