

SABIC® HDPE F01552

HIGH DENSITY POLYETHYLENE

DESCRIPTION

SABIC® HDPE F01552 is a medium molecular weight High Density Polyethylene specifically designed for blown film extrusion and can be used in tape and thin wall pipe extrusion. It has a broad molecular weight with excellent extrudability, high film strength and draw down characteristics. The material contains anti oxidant.

TYPICAL APPLICATIONS

SABIC® HDPE F01552 resin is recommended for the production of strong millinery and notion bags, deep freeze bags, table cloths and thin film as quality replacement for paper products. The material is applicable for irrigation tapes and pipes.

TYPICAL PROPERTY VALUES

Revision 20220512

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
POLYMER PROPERTIES			
Melt Flow Rate (MFR)			
at 190 °C and 2.16 kg	0.15	g/10 min	ISO 1133
at 190 °C and 21.6 kg	16	g/10 min	ISO 1133
Density	952	kg/m ³	ASTM D1505
FILM PROPERTIES			
Tensile Properties ⁽¹⁾			
stress at break, MD	55	MPa	ASTM D882
stress at break, TD	49	MPa	ASTM D882
strain at break, MD	400	%	ASTM D882
strain at break, TD	610	%	ASTM D882
stress at yield, MD	31	MPa	ASTM D882
stress at yield, TD	30	MPa	ASTM D882
1% secant modulus, MD	1400	MPa	ASTM D882
1% secant modulus, TD	1700	MPa	ASTM D882
Elmendorf Tear Strength			
MD	4	g	ASTM D1922
TD	40	g	ASTM D1922
Dart Impact Strength			
F50	180	g	ASTM D1709
THERMAL PROPERTIES			
Vicat Softening Temperature	125	°C	ASTM D1525

(1) Properties are based on 15 µm film produced at a BUR of 4 using 100% F01552.

PROCESSING CONDITIONS

SABIC® HDPE F01552 can be extruded on conventional HMW-HDPE equipment at melt temperatures between 200 and 235°C.

Other typical processing conditions:

Frost line Height: 6-8 times die Ø

BUR: 3-5

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

Polyethylene 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.

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