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SABIC® HDPE GF1442

HIGH DENSITY POLYETHYLENE FOR GEOMEMBRANE

DESCRIPTION

SABIC® GF1442 is a High Density Polyethylene resin grade specially designed for extrusion applications. This grade combines stiffness, toughness, high melt strength and coupled to excellent processability due to its tailored molecular properties design and flow properties. It contains an optimized level of stabilizers and is free from any slip or anti-block additives.

TYPICAL APPLICATIONS

SABIC® GF1442 is typically used in extrusion of Geomembrane applications with superior tensile properties.

Blown Film applications due to excellent processability, flow properties and mechanical properties.

TYPICAL PROPERTY VALUES

Revision 20210705

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
POLYMER PROPERTIES [1]			
Melt Flow Rate (MFR)			
@ 190°C & 2.16 kg load	0.14	g/10 min	ASTM D1238
@ 190°C & 21.6 kg load	13	g/10 min	ASTM D1238
Density at 23°C	940	kg/m³	ASTM D1505
MECHANICAL PROPERTIES [1] [2]			
Tensile Strength at Yield	24	MPa	ASTM D638
Tensile Strength at Break	13.3	MPa	ASTM D638
Tensile Elongation at Yield	10	%	ASTM D638
Tensile Elongation at Break	900	%	ASTM D638
Flexural Modulus (1% Secant)	675	MPa	ASTM D790 A
Hardness (Shore D)	54	-	ASTM D2240
Izod Impact Strength			
@ 25 C°	465	J/m	ASTM D256
ESCR (10% Igepal), F50	>500	Hrs	ASTM D1693B
THERMAL PROPERTIES [1]			
Vicat Softening Point	123	°C	ASTM D1525
Heat Deflection Temperature at 455kPa	72	°C	ASTM D648

(1) Typical values; not to be construed as specification limits
(2) Based on compression molded specimens

PROCESSING CONDITIONS

Typical processing conditions for SABIC® GF1442 are: Average extrusion temperature range may be kept at 190 - 210°C.

FOOD REGULATION

GF1442 is suitable for Food contact application. Detailed information is provided in relevant Material Safety Datasheet and for additional specific information please contact SABIC local representative for certificate.

CHEMISTRY THAT MATTERS™

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STORAGE AND HANDLING

Polyethylene material should be stored in a manner to prevent a direct exposure to sunlight and/or heat. The storage area should also be dry and preferably don't exceed 50°C. SABIC would not give warranty to bad storage conditions which may lead to quality deterioration such as color change, bad smell and inadequate product performance. It is advisable to process PE resin within 6 months after delivery.

DISCLAIMER