



Polyethylene FG5190

Linear Low Density Polyethylene for Film Extrusion

Description

FG5190 is a Butene Linear Low Density Polyethylene for Film Extrusion. Includes Antioxidant.

The grade is developed for medium and heavy duty bags, bags and bin liners, dual stretch films, and film applications demanding high puncture resistance and strength. In mixtures with LD, the grade contribute to improve the draw down, seal strength and avoids bum through problems in shrinkfilm.

Applications

FG5190 has been developed especially for applications like:

Heavy-duty sack
Liners

Stretch hood film

Additives

FG5190 contains antioxidant.

Physical Properties

Property	Typical Value	Test Method
Data should not be used for specification work		
Density	919 kg/m ³	ISO 1183
Melt Flow Rate (190 °C/2,16 kg)	1,2 g/10min	ISO 1133

Film Properties

Film properties are measured on 40 µm film sample produced on a 60 mm W&H extruder with IBC cooling at BUR = 2,5:1. Film properties are strongly dependent of extrusion conditions.

Property	Typical Value	Test Method
Data should not be used for specification work		
Dart Drop	140 g	ISO 7765-1
Haze	12 %	ASTM D 1003
Gloss at 20 degree (of arc)	95	ASTM D 2457
Tensile Stress at Yield	MD 12 MPa	ISO 527-3
Tensile Stress at Yield	TD 12 MPa	ISO 527-3
Tensile Strain at Break	MD 740 %	ISO 527-3
Tensile Strain at Break	TD 850 %	ISO 527-3
Tensile Strength	MD 39 MPa	ISO 527-3
Tensile Strength	TD 34 MPa	ISO 527-3
Tensile Modulus	MD 170 MPa	ASTM D 882-A
Tensile Modulus	TD 210 MPa	ASTM D 882-A
Tear resistance (Elmendorf)	MD 1 N	ISO 6383/2
Tear resistance (Elmendorf)	TD 6,5 N	ISO 6383/2
Coefficient of friction (Dynamic)	0,8	ISO 8295



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¹ MD = machine direction, TD = transverse direction.

Processing Techniques

FG5190 is easily processed on conventional extruders.

The melt temperature should be approximately 235°C. The temperature setting depends on the degree of friction and has to be determined for each individual extruder. LLD polyethylene normally generates higher extrusion pressure than LD at equal output. Watch motor load.

FG5190 has good draw down properties, which result in very few bubble breakages. This makes production possible of extremely thin film with high extruder operation time.

Storage

FG5190 should be stored in dry conditions at temperatures below 50°C and protected from UV-light. Improper storage can initiate degradation with resulting odour generation and colour changes.

More information on storage is found in our "Safety data sheet" / "Product safety information sheet".

Safety

The product is not classified as dangerous.

Please see our "Safety data sheet" / "Product safety information sheet" for details on various aspects of safety, recovery and disposal of the product. For more information, contact your Borealis representative.

Recycling

The product is suitable for recycling using modern methods of shredding and cleaning. In-house production waste should be kept clean to facilitate direct recycling.

Related Documents

The following related documents are available on request, and represent various aspects on the usability, safety, recovery and disposal of the product.

"Safety data sheet" / "Product safety information sheet"

Statement on chemicals, regulations and standards

General statement on compliance to food contact regulations



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Disclaimer

The product(s) mentioned herein are not intended to be used for medical, pharmaceutical or healthcare applications and we do not support their use for such applications.

To the best of our knowledge, the information contained herein is accurate and reliable as of the date of publication, however we do not assume any liability whatsoever for the accuracy and completeness of such information.

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