



Polyethylene Borstar® FB3450

Polyethylene for Film Extrusion

Description

Borstar FB3450 is a high density polyethylene

Borstar FB3450 is well suited for multilayer coextruded films where higher stiffness and toughness than in standard LDPE and LLDPE is required.

Applications

Borstar FB3450 has been developed especially for applications like:

Blending
General packaging film

Additives

Borstar FB3450 contains antioxidant.

Physical Properties

Property	Typical Value	Test Method
Data should not be used for specification work		
Density	945 kg/m ³	ISO 1183
Melt Flow Rate (190 °C/2,16 kg)	0,3 g/10min	ISO 1133
Melt Flow Rate (190 °C/5,0 kg)	1,2 g/10min	ISO 1133
Melt Flow Rate (190 °C/21,6 kg)	25 g/10min	ISO 1133
Melting temperature	128 °C	ISO 11357-3
Vicat softening temperature	123 °C	ISO 306

Film Properties

Film properties are strongly dependent of extrusion conditions.

Property	Typical Value	Test Method
Data should not be used for specification work		
Dart Drop	100 g	ISO 7765-1
Puncture resistance	2,1 J	ASTM D 5748
Energy to break	74 N	
Force	24 %	ASTM D 1003
Haze	40	ASTM D 2457
Gloss		ISO 527-3
Tensile Strain at Break ¹	MD 100 %	ISO 527-3
Tensile Strain at Break	TD 390 %	ISO 527-3
Tensile Strength	MD 44 MPa	ISO 527-3
Tensile Strength	TD 26 MPa	ISO 527-3
Tensile Modulus	MD 290 MPa	ASTM D 882-A
Tensile Modulus	TD 340 MPa	ASTM D 882-A

Borstar is a registered trademark of Borealis A/S, Denmark.

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Tear resistance (Elmendorf)	MD 2,0 N	ISO 6383/2
	TD 1,5 N	
Coefficient of friction (Dynamic)	0,5	ISO 8295

¹ MD = machine direction, TD = transverse direction.

Processing Techniques

Borstar FB3450 is easily processed on conventional extruders.

Borstar FB3450 has excellent flow properties and homogenises well with lower MFR LDPE and LLDPE materials. Borstar FB3450 in LDPE/LLDPE blends contributes with improved bubble stability and draw down.

Borstar FB3450 in blends should be processed in conventional film extruders in order to obtain optimal performance in extrusion and in mechanical properties. By increasing addition of Borstar FB3450 in LDPE and LLDPE, the stiffness of the film increases accordingly. Borstar FB3450 in blends should be processed with 10-15°C higher temperatures on the extruder/die compared to the processing temperatures on the base polymer alone. At higher blend ration or pure Borstar FB3450, the optimal processing is obtained on a HDPE film line with HDPE conditions. The recommended melt temperatures are 200°C-210°C.

Storage

Borstar FB3450 should be stored in dry conditions at temperatures below 50°C and protected from UV-light. Improper storage can initiate degradation, which results in odour generation and colour changes and can have negative effects on the physical properties of this product.

Safety

The product is not classified as a dangerous preparation.

Please see our Safety Data 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

Most Data sheet and safety data sheets are available on Borealis web site www.borealisgroup.com. If the data sheets not could be found on the web, Borealis contact person could supply with information.



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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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