PRODUCT DATA SHEET

Polyethylene

Borstar® FB1350

Polyethylene for Film Extrusion

Description

Borstar® FB1350 is a linear medium density polyethylene grade combining excellent extrusion properties with high film stiffness.

Borstar® FB1350 is well suited for mono- and coextrusion of films produced with high neck or low neck extrusion.

Borstar® FB1350 contains:

Antioxidant

Typical characteristics

Borstar® FB1350 can be described with following typical characteristics:

Bubble stability

Stiffness

Applications

Borstar® FB1350 is intended for following applications:

General packaging film

Pouches

Geomembranes

Refuse sacks and liners

Heavy duty shipping sack

Blending

Physical properties

Property	Typical value *	Unit	Test method
Density	935	kg/m³	ISO 1183-1
Melt flow rate (190 °C/5 kg)	0.6	g/10min	ISO 1133-1
Melt flow rate (190 °C/21.6 kg)	15	g/10min	ISO 1133-1
Melting temperature	127	°C	ISO 11357-3

* Data should not be used for specification work

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Borstar® FB1350

Film properties

Property	Typical value *	Unit	Test method
Tensile Modulus MD[1]	500	MPa	ISO 527-3
Tensile Modulus TD[1]	650	MPa	ISO 527-3
Tensile strain at break MD[1]	500	%	ISO 527-3
Tensile strain at break TD[1]	700	%	ISO 527-3
Tensile strength MD[1]	58	MPa	ISO 527-3
Tensile strength TD[1]	45	MPa	ISO 527-3
Tear resistance (Elmendorf) MD[1]	22	N/mm	ISO 6383/2
Tear resistance (Elmendorf) TD[1]	265	N/mm	ISO 6383/2
Dart drop[1]	270	g	ISO 7765-1
Haze[1]	88	%	ASTM D1003
Coefficient of friction (Dynamic)[1]	0.30	-	ISO 8295

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[1] *Film properties measured on 40 µm blown film on 60 mm Windmöller & Hölscher extruder L/D = 30, die diameter 200 mm, die gap 1.4 mm, BUR =3:1, FLH = 4DD*

Processing techniques

Borstar® FB1350 is easily processed on conventional extruders.
Borstar® FB1350 is best processed on conventional LDPE/HDPE or combination extruders. FB1350 is especially developed for high strength, high stiffness Borstar® grade. Conventional HDPE/LDPE die gaps 1,2-1,5 mm is recommended and this will give the best balance between extruder melt pressure and physical film properties.
Recommended melt temperature range is from 190°C to 210°C. Due to differences in screw and die head designs, the optimum temperature adjustments are individual and should be sought for each production line.
With suitable equipment Borstar® FB1350 can be drawn down to 15 micron as mono film.

Packaging and storage

Borstar® FB1350 should be stored in dry conditions at temperatures below 50°C and protected from UV-light. Improper storage can initiate degradation, which can result in odour generation and colour changes and can have negative effects on the physical properties of this product.

Product compliance documents

Latest versions of product safety information sheets (PSIS), product safety data sheets (SDS) and other product liability documents are available in our website www.borealisgroup.com.

Sustainability aspects

Borealis is ever mindful of the impact of our products on the planet. We promote Design for Circularity (DfC) and Design for Recycling (DfR) to conserve natural resources and to reduce the environmental impact of products over their entire lifetime (including production, use phase and after phase). DfR helps ensure that material can be effectively recycled while maximizing the material performance efficiency. Further information on sustainability and Design for Recycling (DfR) can be found from our websites www.borealisgroup.com and www.borealiseverminds.com.

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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It is the customer's responsibility to inspect and test our products in order to satisfy itself as to the suitability of the products for the customer's particular purpose. The customer is responsible for the appropriate, safe and legal use, processing and handling of our products.
No liability can be accepted in respect of the use of any Borealis product in conjunction with any other products and/or materials. The information contained herein relates exclusively to our products when not used in conjunction with any other material unless as specifically provided for in the test methods stated above.

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