

Polyethylene

Borstar® FB4370

Polyethylene for Film Extrusion

Description

Borstar® FB4370 is a linear medium density polyethylene grade combining excellent extrusion properties with high film stiffness.

Cas No. 25087-34-7

Borstar® FB4370 contains:

Antioxidants

Typical characteristics

Borstar® FB4370 can be described with following typical characteristics:

Bubble stability Stiffness modifier
 Easy to extrude

Applications

Borstar® FB4370 is intended for following applications:

Lamination film Packaging film
 Shrink film

Physical properties

Property	Typical value *	Unit	Test method
Density	937	kg/m ³	ISO 1183-1
Melt flow rate (190 °C/5 kg)	2.10	g/10min	ISO 1133-1
Melting temperature	128	°C	ISO 11357-3

* Data should not be used for specification work

Borstar® is a registered trademark of the Borealis Group



Polyethylene

Borstar® FB4370

Film properties

Property	Typical value *	Unit	Test method
Tensile Modulus MD ¹	550	MPa	ISO 527-3
Tensile Modulus TD ¹	750	MPa	ISO 527-3
Tensile strength MD	50	MPa	ISO 527-3
Tensile strength TD	40	MPa	ISO 527-3
Tensile strain at break MD	600	%	ISO 527-3
Tensile strain at break TD	790	%	ISO 527-3
Dart drop	100	g	ISO 7765-1
Instrumented puncture test, Total penetration energy	13	J/mm	ISO 7765-2
Tear resistance (Elmendorf) MD ²	30	N/mm	ISO 6383/2
Tear resistance (Elmendorf) TD ²	240	N/mm	ISO 6383/2
Haze	65	%	ASTM D1003
Gloss 45°	8	GU	ASTM D2457
Coefficient of friction (Dynamic)	0.30	-	ISO 8295

* Data should not be used for specification work

¹ Internal method

² Relative tear resistance

Film properties measured on 40 µm blown film on 60 mm Windmüller & Hölscher extruder L/D = 30, die diameter 200 mm, die gap 1.4 mm, BUR =3:1, FLH = 3.5DD

Processing techniques

Borstar FB4370 is easily processed on conventional extruders. FB4370 is especially developed as an easy processing Borstar which gives low melt pressure also in blown coex film lines. Conventional 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 FB4370 can be drawn down to 20 micron as mono film.

Packaging and storage

Borstar® FB4370 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.

Borstar® is a registered trademark of the Borealis Group



Polyethylene

Borstar® FB4370

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.

Borealis makes no warranties which extend beyond the description contained herein. Nothing herein shall constitute any warranty of merchantability or fitness for a particular purpose.

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.