PRODUCT DATA SHEET

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
Easy to extrude
Stiffness modifier

Applications

Borstar® FB4370 is intended for following applications:

Lamination film
Shrink film
Packaging film

Physical properties

Property	Typical value *	Unit	Test method
Density	937	kg/m³	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

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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 stress at break MD	50	MPa	ISO 527-3
Tensile stress at break 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

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[1] *Internal method*
[2] *Relative tear resistance*

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 = 3.5DD

Processing techniques

Borstar® FB4370 is easily processed on conventional extruders. Borstar® 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. When correctly stored in unopened original package, and according to the above guidelines, the material has a shelf life of 12 months from the date of production. Improper storage can initiate degradation, which can result in odor generation and color 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.

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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.
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