

## Product Data Sheet

# Polyethylene

# Anteo™ FK1820

**BORSTAR® BIMODAL TERPOLYMER LLDPE FOR HIGH PERFORMANCE FLEXIBLE PACKAGING**

### DESCRIPTION

**Anteo™ FK1820** is produced using the proprietary **Borstar®** bimodal terpolymer technology combining outstanding sealing performance with easy processability, good optics and superior mechanical properties. Film made with **Anteo™ FK1820** exhibits unique combination of low seal initiation temperature (SIT), high hot tack force and excellent puncture and tear properties. **Anteo™ FK1820** used in combination with **Borstar® PE / BorShape™ PE / LDPE / PP** products offers best in class high performance transparent flexible packaging solution with potential for down gauging.

**Anteo™ FK1820** contains Antioxidant and Processing Aid (PPA).

### APPLICATIONS

Heavy Duty Shipping Sacks (HDSS)	Stretch Hood	Liner
Lamination	Frozen Food Packaging	Food Packaging
Standup Pouch	Form Fill Seal (FFS)	Artificial Grass
Agriculture Film	Transparent Film	Lamitube
Multilayer Packaging Film	Impact Modifier	Protection Film
Stretch cling Film		

### KEY FEATURES

Easy Processability	Superior Puncture Resistance	Good Optics
Excellent Mechanical Strength	Excellent Organoleptic Properties	
Excellent Low Temperature Performance	Balanced Tear Strength	
Outstanding Seal Performance (Low SIT, High Hot Tack force and Wide Sealing Window)		

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 Anteo™ is a trademark of the Borealis group

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## PHYSICAL PROPERTIES

Property	Typical Value*	Unit	Test Method
Density	918	kg/m <sup>3</sup>	ASTM D 792
Melt Flow Rate MFR (190°C/2.16 kg)	1.5	g/10min	ASTM D1238
Melting Temperature	122	°C	ISO 11357/03
Vicat Softening Point	102	°C	ASTM D 1525

\*Typical properties and data should not be used for specification work

## FILM PROPERTIES

Anteo™ FK1820 film properties are measured on 40 micron blown film produced on a lab scale extruder with processing conditions: BUR = 2.5:1, FLH = 3 DD, Die gap =1.8mm

Property		Typical Value*	Unit	Test Method
Tensile Strength at Break	MD/TD	52/50	MPa	ISO 527-3
Elongation at Break	MD/TD	650/700	%	ISO 527-3
Tensile Strength at Yield	TD	11	MPa	ISO 527-3
Tensile Modulus	MD/TD	210/220	MPa	ISO 527-3
Tensile Modulus (1 % Secant)	MD/TD	190/200	MPa	ASTM D 882
Elmendorf tear strength	MD/TD	550/700	g	ASTM D 1922
Dart Drop		>1000	g	ASTM D 1709/A
Coefficient of Friction (Dynamic)		0.8	-	ASTM D 1894
Haze**		8%		ASTM 1003
Gloss (45)**		70		ASTM D 2457
Puncture Resistance, force		55	N	ASTM D 5748
Puncture Resistance, energy		4.5	J	ASTM D 5748

\*Typical properties and data should not be used for specification work

\*\* blend with 10 % LDPE

## PROCESSING GUIDELINES

Anteo™ FK1820 can be processed in most types of blown film equipment such as LDPE, LLDPE or HDPE extruders.

Anteo™ FK1820 is well suited for co-extrusion™ in combination with Borstar® PE/ BorShape™ PE / LDPE / PP products.

Recommended extrusion temperature is 180 - 210°C. Die gap of 1.4 - 2.2 mm will give the best balance between extruder pressure and physical properties in the film. Anteo™ FK1820 enables energy saving by processing at lower temperature and motor load with excellent bubble stability.

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To boost optical properties of film made with **Anteo™ FK1820**, it is recommended to blend with minimum 5% LDPE.

### FOOD CONTACT REGULATIONS

**Anteo™ FK1820** fulfils the food contact regulations in most countries. If required, contact your Borouge / Borealis representative for a certificate.

### STORAGE

The product 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. More information on storage can be found in Safety Information Sheet for this product.

### SAFETY

The product is not classified as a hazardous mixture.

Dust and fines from the product carry a risk of dust explosion. All equipment should be properly earthed. Inhalation of dust should be avoided as it may cause irritation of the respiratory system. Small amounts of fumes are generated during processing of the product. Proper ventilation is therefore required.

A Safety Information Sheet is available on request. Please contact your Borouge representative for more details on various aspects of safety, recovery and disposal of the product.

### 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

If more information is required, please visit [www.borouge.com](http://www.borouge.com) or contact a Borouge / Borealis representative for information.

### 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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