

PRODUCT NEWS

Anteo™ FK1820 & FK1828 Enabled by Borstar® Bimodal Terpolymer Technology



بروج
Borouge





Anteo™ – the new ingredient for complete success

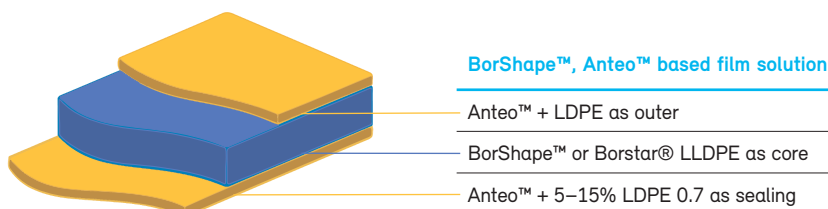
Anteo™ based on the Borstar® Bimodal Terpolymer Technology completes the Borealis and Borouge polyethylene portfolio in flexible packaging, offering unlimited possibilities once combined together with BorShape™, Borstar® LL, Queo™, PP and LDPE to deliver the best in class full solution in demanding applications.

Processing guideline

Anteo™ FK1820 & FK1828 are Bimodal Terpolymer LLDPE produced using the proprietary **Borstar® Bimodal Terpolymer Technology** combining easy processability with outstanding sealing performance, good optics and superior mechanical properties. Film made with Anteo™ FK1820 & FK1828 exhibits a unique combination of low seal initiation temperature (SIT), high hot tack force, wide sealing window and outstanding puncture and tear resistance. Anteo™ FK1820 & FK1828 used in combination with Borstar® and BorShape™ Bimodal LLDPE offer the best in class solution for high performing film allowing further downgauging in flexible packaging.

- **Anteo™ FK1820** contains Antioxidant and Polymer Processing Aid (PPA).
- **Anteo™ FK1828** contains Antioxidant, Polymer Processing Aid (PPA), Slip Agent and Antiblocking Agent.
- **Anteo™ FK1820 & FK1828** can be processed in most types of blown film equipment. The product is well suited for co-extrusion with BorShape™ FX1001 or BorShape™ FX1002 and Borstar® LLDPE's.

An example of a typical high transparent BorShape™, Anteo™ based film solution allowing high output and further downgauging potential combined with outstanding pack integrity is illustrated below.



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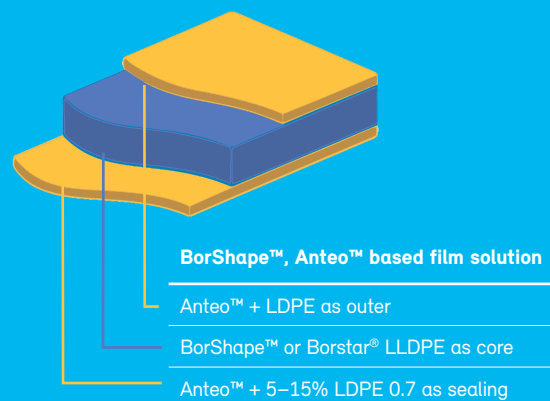
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Multi-layer film made with Anteo™ FK1820 in skin layer processed in state of the art blown film line.



General processing conditions:

Blown film Process Parameter	BorShape™ FX1001, BorShape™ FX1002, Borstar® LLDPE	Anteo™ FK1820, Anteo™ FK1828
Melt Temperature	190–210°C	180–200°C
Die Gap	1.4–2.2mm	1.4–2.2mm
Blow up Ratio (BUR)*	2:1–4:1	2:1–4:1
Frost Line Height (FLH)	2–4 DD	2–4 DD
Blending Ratio	LD/mLLDPE/LLD/HD with MFR (<2) in co-extrusion	5–10% LDPE for good optics

*Blow up Ratio – BUR = 0.637 x Lay flat width /Die diameter

Impact of processing parameters on film properties made with Anteo™ FK1820 & FK1828

issue	Dart	Glass 45°	Haze	Tear MD	Tear TD	Punc- ture resis- tance	SIT (°C)	Hot tack T° (°C)	COF
Die Gap ↑	↓	↓	~	↓	↑	~	↑	↑	
BUR ↑	↑	↓	↑	↑↑	↑	↑↑	~	↑	↓
Melt T° ↑	~	↑↑	↓↓	↑↑	↑↑	↑	↓↓	↓↓	↑
LDPE content ↑	↓↓	↑↑	↓↓	~	~	↓↓	↑↑	↑↑	↑↑
Sealing layer thickness ↑	↑	~	~	~	↑	↓	↓	↓	↓↓

To optimise Anteo™ performance, it is recommended to use low FLH (frost line height), 2–3 DD and a BUR ≥ 2.

To achieve better optical properties, blending 5–10% LDPE is recommended.

Your Borealis representative is available to provide in-depth processing and troubleshooting assistance.

More information on Borstar® LLDPE, BorShape™ and Anteo™ resins is available at www.borealisgroup.com

Making everyday life easier

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About Borealis Borealis is one of the world's leading providers of advanced and circular polyolefin solutions and a European market leader in base chemicals, fertilizers and the mechanical recycling of plastics. We leverage our polymers expertise and decades of experience to offer value adding, innovative and circular material solutions for key industries. In re-inventing for more sustainable living, we build on our commitment to safety, our people and excellence as we accelerate the transformation to a circular economy and expand our geographical footprint.

With head offices in Vienna, Austria, Borealis employs 6,900 employees and operates in over 120 countries. In 2021, Borealis generated total sales and other income of EUR 10,153 million and a net profit of EUR 1,396 million. OMV, the Austria-based international oil and gas company, owns 75% of Borealis, while the remaining 25% is owned by a holding company of the Abu-Dhabi based Mubadala. We supply services and products to customers around the globe through Borealis and two important joint ventures: Borouge (with the Abu Dhabi National Oil Company, or ADNOC, based in UAE); and Baystar™ (with TotalEnergies, based in the US).

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FOR MORE INFORMATION:

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