



High Density Biaxially Oriented Polyethylene

Market Focus Overview

Advancing the Circular Economy with Recyclable BOPE Films

Biaxially oriented polyethylene (BOPE) offers a recyclable replacement to biaxially oriented polypropylene (BOPP) and PET (BOPET) multi-material laminates or metalized structures. NOVA Chemicals has fulfilled the promise of these recyclable films with the world's first high density polyethylene (BOPE-HD) resin designed to run in the tenter frame process. Several film formulations have been successfully trialed on commercial, semi-commercial and pilot scale equipment. HDPE allows an all-polyethylene biaxially oriented print web, which can be laminated to a polyethylene sealant web for complete recyclability.



- High gloss/low haze or matte finish options
- High stiffness to maintain registration for printing and converting
- Proven processability on commercial tenter frame lines, including lines designed for BOPP
- Sufficient heat resistance for packaging, metallization and coating processes
- High puncture resistance and easy open tear
- Stable coefficient of friction (COF) and receptive to surface modification via corona treatment

We are working with film producers across multiple regions to establish a global supply of commercial BOPE-HD films.

Proof of Concept

High-clarity BOPE to blown film laminate prototype demonstrates packaging feasibility and aesthetics. Samples available upon request.



BOPE Applications Development Capabilities

NOVA Chemicals' 87,000 square foot Centre for Performance Applications is dedicated to polyethylene applications development work in a range of rigid and flexible markets.

BOPE capabilities at the Centre include lamination, slitting, treating and both VFFS and HFFS lab-scale packaging lines. Our converting equipment provides R&D flexibility and allows for real-life trials and testing. We have also comprehensive physical and package testing capabilities that simulate performance under real-world conditions.



The prototyping, testing and BONFIRE® platform film modeling we do in-house saves our customers resources and valuable line time – allowing them to focus on commercial production while speeding time to market for new products and applications.

Applications



BOPE-HD may be able to replace the BOPP or BOPET print web in a range of applications:

- Metallized films
- Stand-up pouch
- Flow wrapper
- Pillow packs
- Tapes and labels

US/Pittsburgh | +1.412.490.4170 | 800.222.7213 x4170 | markets@novachemicals.com | novachemicals.com

2

The NOVA Chemicals logo is a registered trademark of NOVA Brands Ltd.; authorized use/utilisation autorisée. BONFIRE is a registered service mark of NOVA Chemicals Corporation. The BONFIRE logo is a service mark of NOVA Chemicals.

The Brückner logo is a registered trademark of Brückner Group GmbH. The Polivouga logo is a registered trademark of Polivouga - Indústria de Plásticos, S.A.

The above information is provided in good faith. NOVA Chemicals is not responsible for any processing or compounding which may occur to produce finished articles, packaging materials, or their components. Further, NOVA CHEMICALS MAKES NO WARRANTY OR REPRESENTATION OF ANY KIND, REGARDING THE INFORMATION GIVEN FOR THE PRODUCT DESCRIBED, AND EXPRESSLY DISCLAIMS ALL IMPLIED WARRANTIES, REPRESENTATIONS AND CONDITIONS, INCLUDING WITHOUT LIMITATION ALL WARRANTIES AND CONDITIONS OF QUALITY, MERCHANTABILITY AND SUITABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Responsibility for use, storage, handling and disposal of the products described herein is that of the purchaser or end user.

B21AH