



## Over-the-mountain Films For Enhanced Packaging Performance

In the world of packaging, ensuring the safe transport and preservation of products is absolutely essential. However, the challenges posed by high-altitude and low-pressure conditions during transportation have long been a concern for manufacturers and brand owners. Packages that burst, lose their integrity, or allow oxygen and moisture ingress can result in significant product waste and compromised freshness, leading to dissatisfied customers and financial loss.



To address this critical issue, the development of Over-the-Mountain (OTM) films has emerged as a game-changing solution. OTM films are specifically designed to maintain package integrity and seal strength when shipping in high-altitude environments. By providing superior seal performance, high burst strength, and excellent barrier properties, these films ensure that products remain fresh, visually appealing, and intact throughout the rigorous transportation process.

Just ahead, we will delve into the challenges faced during packaging and transportation and how OTM films offer a reliable solution to overcome these obstacles. We will also discuss the innovative technologies behind OTM films, their diverse applications and benefits, and real-world success stories.

By understanding the potential of OTM films, Polymerall Flexible Packaging customers can gain a competitive edge, enhance their brand reputation, and achieve optimal product quality and longevity. Let us delve into the world of OTM films and discover how they can revolutionize your packaging strategies in high-altitude transportation scenarios.

# Challenges in Packaging and Transportation

Transporting snacks in high-altitude and low-pressure conditions poses unique challenges for flexible packaging. The fluctuating air pressure can lead to package bursting, compromised seals, and the ingress of oxygen and moisture, ultimately affecting the quality and freshness of the snack products. In this section, we will explore these challenges in detail and discuss how Over-the-Mountain (OTM) films provide an effective solution.

When transport vehicles reach high altitudes, the outside air pressure decreases significantly. Meanwhile, the air pressure inside sealed packaging remains relatively high. This pressure differential can cause the packages to burst, resulting in spilled contents and rendering the snacks unmarketable and inedible. Package bursting not only leads to product waste but also compromises the appearance of the packaging, negatively impacting consumer perception and brand reputation.

High-altitude transportation can put additional stress on package seals, leading to seal failure or damage. This can occur even without package bursting, making it challenging to identify the issue during the stocking of shelves. However, compromised seals allow oxygen and moisture to permeate the package, leading to food freshness degradation and spoilage. The presence of leaks or faulty seals can also cause necessary oils in the packaged product to leak out, resulting in a greasy texture on the package surface and potential staining of secondary packaging.

Snacks rely on the integrity of their packaging to maintain freshness and extend their shelf life. Exposure to oxygen and moisture can accelerate the deterioration of snacks, resulting in reduced quality, flavor degradation, and shortened shelf life. In high-altitude conditions where the risk of oxygen and moisture ingress is heightened, it becomes crucial to ensure robust packaging solutions that effectively maintain product freshness throughout the transportation process.

To overcome these challenges, the implementation of OTM films in flexible packaging for snacks proves to be a game-changer. OTM films are specifically designed to withstand high-altitude and low-pressure conditions, addressing the unique requirements of snack packaging.

# Understanding OTM Films

The OTM film lamination offered by Polymerall combines advanced materials and sealing technologies to ensure the integrity, freshness, and visual appeal of snack products throughout their journey. Let's delve deeper into the key features and benefits of this innovative solution:

## *Superior Seal Performance:*

The proprietary film lamination from Polymerall incorporates a high-performance sealant that provides exceptional seal strength. This robust seal is specifically engineered to withstand the pressure differentials experienced during high-altitude transportation, preventing package bursting and leakage. The advanced sealing technology ensures airtight and secure seals, protecting the snacks from external elements such as oxygen and moisture.

## *Enhanced Barrier Properties:*

Maintaining an effective barrier against oxygen and moisture is crucial for preserving the quality and freshness of snack products. The OTM film lamination from Polymerall offers excellent barrier properties, effectively preventing the ingress of oxygen and moisture into the packaging. This helps to extend the shelf life of the snacks and ensures that consumers receive products that are as fresh as when they were packed.

## *Customized Film Composition:*

Polymerall understands that different snack products have varying packaging requirements. Therefore, they offer a range of film compositions tailored to meet specific needs. Whether it's for salty snacks, cookies, crackers, or confectionery items, Polymerall's OTM film lamination can be customized to provide the ideal combination of strength, flexibility, and barrier properties required for each snack type.

## *Lightweight and Sustainable:*

In addition to its functional benefits, the OTM film lamination from Polymerall offers sustainability advantages. By utilizing advanced materials and design principles, Polymerall has developed a lightweight film composition that reduces the overall amount of packaging material required. This not only contributes to lower transportation costs but also aligns with environmental sustainability goals by minimizing material usage and waste.

## OTM Composition and Performance

Polymerall's OTM film composition is a three-layer lamination designed specifically for snack applications, bakery products, confectionery goods, coffee, and other dry foods. This innovative lamination consists of a combination of Polypropylene, Metalized Polyester, and a proprietary sealant layer, offering exceptional performance and functionality.

The Polypropylene layer provides strength and flexibility to the film, ensuring it can withstand the rigors of transportation while maintaining its structural integrity. The Metalized Polyester layer adds a layer of protection and provides enhanced barrier properties, effectively blocking oxygen and moisture from entering the packaging and preserving the freshness of the enclosed snacks. This layer also offers a reflective and visually appealing surface that enhances the product presentation.





The proprietary sealant layer is a key component of Polymerall's OTM film composition. This layer is responsible for creating a hermetic seal, ensuring the packaging remains airtight and prevents any leakage or spoilage of the snacks. The sealant layer is carefully engineered to provide superior seal strength and integrity, even under the pressure differentials experienced during high-altitude transportation.

The film can be finished with various options such as matte, gloss, or registered matte varnish, allowing brand owners to choose the desired visual appearance that aligns with their brand identity and product positioning. Additionally, the film thickness can range from 1.2 mil to 7 mil, providing flexibility to accommodate different packaging requirements.

Polymerall's OTM films offer a significant advantage to independent brand owners, CPG companies, and natural product manufacturers. By utilizing these films, businesses can scale up their operations and expand their reach to a national level. The superior performance, excellent barrier properties, and customization options of the OTM films empower companies to deliver their products to a broader consumer base while ensuring the snacks' freshness and quality are maintained throughout the distribution process.

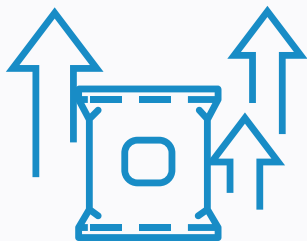
# Benefits of OTM Films for Polymerall Flexible Packaging Customers

## *Reduced Product Waste and Cost Savings*



Polymerall's OTM films offer significant benefits to flexible packaging customers by reducing product waste and enabling cost savings. The robust seal performance of these films ensures that the packages remain intact during high-altitude transportation, preventing burst seams and spillage of the snacks. This means that a higher percentage of products reach the shelves in optimal condition, reducing the need for replacements and minimizing product waste. By minimizing product loss, brand owners can realize substantial cost savings and improve their overall profitability.

## *Enhanced Brand Image and Consumer Confidence*



With Polymerall's OTM films, flexible packaging customers can enhance their brand image and inspire consumer confidence. The films' exceptional seal integrity and hermeticity ensure that the snacks remain fresh and protected, even when transported across high altitudes. This helps to maintain the product's quality, flavor, and appearance, which are crucial factors for consumer satisfaction. When customers consistently receive snacks that are in pristine condition, they develop trust in the brand and its commitment to delivering high-quality products. This enhanced brand image contributes to increased customer loyalty and positive word-of-mouth recommendations.

### *Improved Product Safety and Shelf Life*



The OTM films developed by Polymerall are designed to address the challenges posed by high-altitude and low-pressure conditions during transportation. The combination of Polypropylene, Metalized Polyester, and the proprietary sealant layer provides an effective barrier against oxygen and moisture, safeguarding the snacks from potential contamination and degradation. This improved product safety ensures that consumers receive snacks with optimal freshness and quality, enhancing their overall satisfaction. Additionally, the films' ability to extend the shelf life of packaged products from about six months to one year provides added value to brand owners, enabling them to reach wider distribution networks and reduce the risk of product spoilage.

### *Sustainability Advantages and Raw Material Reduction*



Polymerall's OTM films offer sustainability advantages, aligning with the growing demand for environmentally friendly packaging solutions. These films are designed to be thin and lightweight, resulting in a significant reduction in raw material usage compared to traditional laminates. By transitioning from a three-layered to a two-ply structure, brand owners can reduce their environmental footprint and promote sustainability. The films also support waste reduction efforts by producing less packaging waste throughout the supply chain. This emphasis on sustainability not only appeals to eco-conscious consumers but also contributes to brand differentiation and the achievement of corporate sustainability goals.

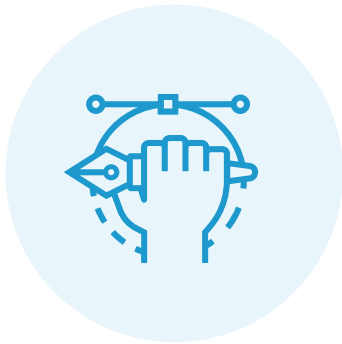
At Polymerall, we are flexible packaging experts with innovations like OTM films. Our manufacturing capabilities allow us to offer the highest quality materials with the fastest turnaround for a wide variety of applications. Call us today for a custom quote from one of the representatives from our team.



## Why choose Polymerall?

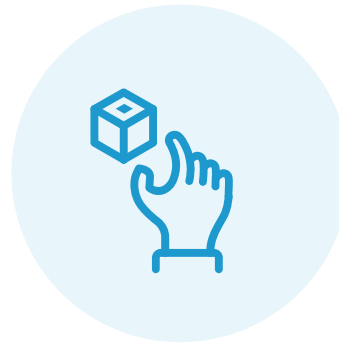
### We Are Your One-Stop Go-To for All Your Flexible Packaging Needs

Our team of creative professionals is dedicated to improving brands with customized, efficient and innovative flexible packaging solutions. Producing custom printed, laminated and specialty finished rollstock, laminated films and high-barrier films is one of our specialties.



#### Customizable Design

We offer high-quality packaging solutions with sustainable alternatives such as oxo-biodegradable additives, water-based inks and solvent-less lamination, plus all our packaging can be recycled by consumers.



#### Minimum order quantities

We are proud to offer low minimum order quantities.



#### 4 week lead time

4-week lead time, while we work with each client to ensure their product is designed to boost sales, maintain freshness, and lead their company to success.



#### Highest safety certifications

Our facilities and operations have also been awarded the highest safety certifications possible, including the ISO 9001 Quality Control Certification, and the FSSC 22000 Food Safety Certification.

Our manufacturing facilities hold ISO9001, FSSC 22000, FDA and HACCP certifications that guarantee the quality of our products and services.



