

Case Study

Pregis helps transportation manufacturer improve carbon footprint and reduce material usage with Pregis PolyMask™ surface protection



Pregis PolyMask™ Temporary Protective Film

Overview

Pregis provides protective film for a transportation manufacturer that has been in business since 1985, and has a strong reputation as the visionary leader in improving how semi-trailers are designed and built. The customer applies personalized modifications to its semi-trailer designs that delight buyers and move the transport business forward in design ingenuity and sustainability.

This manufacturer boasts one of the largest fleets in North America and has consistently innovated with environmental stewardship in mind. That is why, when presented with an opportunity to reduce waste and its overall carbon footprint, the company eagerly collaborated with a protective packaging expert, Pregis.

Challenge

Frequent highway drivers will recognize temporary film used to protect cars and metal objects transported by trucks. It is meant to be taken off and disposed of when the item reaches its destination. In this case, the customer fabricates semi-trailer truck siding and then applies Pregis PolyMask temporary protective film to prevent damage. The siding is stacked and palletized for truck transport. The challenge consisted of optimizing the robust surface protection the client had become accustomed to, while reducing material usage and improving overall efficacy.

Solution

Continuous improvement is a strict process and collective mindset at Pregis, and its technical sales and engineering teams are always hard at work **developing new formulations that can reduce the amount of material used or create new characteristics for specific applications, all while retaining the film's toughness** which customers have come to rely on.

The senior technical sales team at Pregis Performance Flexibles explained that in this case the search for a Pregis PolyMask solution with essential toughness but less material was ongoing. "We had been working to perfect a more sustainable solution for the customer until we got it just right. We are fortunate to have the resources available to think outside the box, to test and validate – all before the film arrives to the customer. This means we can offer best-in-class, tried and tested solutions to customers who have exacting applications."

When the opportunity presented itself to recommend a new Pregis PolyMask temporary protective film formulation, Pregis rigorously tested the new solution under similar use conditions for four weeks prior to presenting it to the customer.

Further, when considering the use of fossil fuels, water, and resulting GHG emissions from manufacturing the products to their final shipment, Pregis confirmed that the new solution would cost less and reduce these environmental impacts while delivering the same product performance.

Robust
surface
protection

Reduced
material
usage

Improved
overall
efficacy

**We can offer best-in-class,
tried and tested solutions
to customers who have
exacting applications**



Pregis then approached the customer with its recommendation to transition to the new temporary protective film formulation. The solution then underwent another round of field testing by the customer.

The type of adhesive and level of tack is custom and specifically formulated for the application, environment, storage, and ship cycle. Internal customer testing was done over six weeks and validated the findings from testing performed by Pregis.

Considering three product stages (material, manufacturing, and end of life), the following outcomes regarding resource usage were found:

- **Greenhouse Gas Emissions** decreased by **16 percent** after migrating to the new film. At an annual quantity of 44 million sqft, emissions reduced nearly 350 tons of CO₂ from the previous 500 tons. The difference is equivalent to almost 30,000 liters of car fuel consumed.
- **Water usage** dropped to **16 percent** with the same replacement. From an annual consumption of over 325,000 m³, water usage was reduced to less than 275,000 m³. The difference is enough to fill over 20 Olympic-size swimming pools. Why did water usage decrease? Water is used both in the raw material extraction process and also during the extrusion of the film. When the overall volume of plastic sourced and manufactured decreased, water usage consequently decreased as well.
- **Fossil fuel usage** also decreased by **16 percent** after applying the new Pregis PolyMask film. Annual consumption of 9,500 MJ dropped to 8,000 MJ, a decrease of 1,500 MJ overall which leads to savings that could fuel an average of 44 houses per year.

These figures were critical to the customer as they set the standard for their industry in environmentally-sound practices. More importantly, the new film performed at the same high level as the previous solution.

They now have a more sustainable and efficient solution because of Pregis' continued efforts to deliver value to customers.



Reduce cost



Reduce
environmental
impact



Product
performance

Pregis can help you realize your sustainability goals.
Contact us for a no cost film sample and consultation.